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SOCIALIZED MEDICINE*
THE PHANTOM APPROACHES

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The term socialized medicine is not intended to designate companionable or friendly or humanitarian medicine. Socialized medicine denotes the plan of medical care consistent with a political viewpoint of socialism which may be defined as "a political and economic theory of social reorganization, the essential feature of which is governmental control of economic activities to the end that competition shall give way to cooperation and that the opportunities of life and the rewards of labor shall be equitably apportioned."

No doctor who has had the responsibility of life in his care and who repeatedly has had to make decisions or perform technical procedures upon which life and death may be determined, could do other than approve the idea that all humanity—each man, woman and child—deserves the most that medical science can offer to ameliorate the suffering of their illnesses and prolong their life in health. Unfortunately the best of medical science is not available to every individual of the world. Let it be acknowledged with little for controversy that as a people or a nation, the people of the United States have the best medical care in the entire world. This is no vain boast. It has been recognized as a fact by doctors for generations that the facilities and abilities in the medical centers of the United States have been superior to those of other nations.

Unfortunately, however, even in the United States satisfactory medical services are not always available to everyone. The reasons for this are the changing type of practice, the increased cost, the lack of medical facilities and absence of doctors in certain sections. Formerly the family doctor performed most if not all of the professional needs for a family. He delivered the children, directed their care and medicines, fixed fractures and did an occasional appendectomy. But today, especially in medical centers, he is not as often found. Why? Because the tremendous expansion of knowledge has made it impossible for anyone to be thoroughly versed in each of these lines and because specialists with a high degree of information and skill in different branches are sought, wherever available, when a difficult clinical problem arises.

The family doctor is often praised for his diagnostic acumen, his skillful insight and expert senses, but in reality, they were not more keen nor more accurate in physical diagnosis without laboratory aids than is the doctor of today. The doctors of previous generations were often incorrect, but this was not proved to them by methods of precision in diagnosis, such as exist today. That is not to disparage the value or the efficiency of the doctors of past generations; for, lest the physician or surgeon of today become too proud of his comparative knowledge and skill, let him admit that

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fifty years hence he will appear poor indeed when compared with the skill and exactness which will have developed since now. Precision instruments and facilities are most expensive, an economic factor with which the older family doctor did not have to contend; but the modern doctor knows he must have them and use them.

Besides the changes in the type of medical practice, numerous other factors combine to make the cost of medical diagnosis and care much more dear than formerly. These factors include expensive laboratory tests, instruments, expensive drugs, complicated administration of drugs and special nursing care for sick patients. In addition to this the rapid expanse of knowledge necessitates continued research and continued re-education of physicians by travel and attendance at meetings.

Hospitalization is much more often essential now than formerly, because so much more can be done to cure patients promptly and completely. Roentgenograms (x-ray examinations) are much more frequently needed now than formerly because certain lesions can be diagnosed only with the aid of x-ray. For example, cancer of the stomach in a stage when it can be removed by an operation may be diagnosed accurately only by the x-ray. All of these factors have tremendously increased the cost of diagnosis and treatment; all of them have tended to make modern medicine unavailable to more and more people.

The reasons are not economic alone, they are geophysic as well. There are more doctors per capita in metropolitan areas, fewer in rural areas. Wealth is not the only factor influencing this. Other causes for this unequal distribution are the availability of medical facilities and the presence of other experts. Some of the highest per capita doctor to patient ratios in the country are in small towns under 35,000 where the profession consists of experts with precision facilities.

The cry on the part of politicians that doctors are not well distributed is in reality more a problem of transportation than of the existence of medical facilities. Able doctors demand and help to create the necessary facilities including laboratories and hospitals. A state is far better off to have a few centers with experts and expert facilities and a scarcity of doctors in its extremely small communities than to have an abundance of widely disseminated doctors without medical centers. People may recover from mild illnesses. They must have experts with proper equipment to pull them through some of the serious illnesses. Somehow all of this and in the best of form, should be made available to all people.

The method of accomplishing this has been the thought of many men; political economists, politicians, statesmen, organized medicine, the doctors and the people themselves. The proposals of designs for its accomplishment vary from pure communism and socialism to more conservative changes; and admittedly in some small sources there is pure obstruction to any change.

Various health bills and proposals have been introduced in numerous states and in the Congress of the United States. Among the most important are the Hill-Burton Bill (S-191), the Wagner-Murray-Dingell Bills, and the National Health Message of Harry S. Truman, President of the United States.

The Hill-Burton Bill (S-191) was introduced into Congress January 1945, by Senator Hill (Alabama) and Senator Burton (Ohio). It has been passed by the Senate. It provides for survey of public health facilities and for construction of hospitals and public health centers. It authorizes an appropriation of $75,000,000.00 annually for each of five fiscal years for the construction program. Other than minimum requirement standards, it divests the federal government of its control and leaves the operation and management of the institutions to local and state agencies. Such a program the people, doctors and organized medicine can approve and applaud. The first step in providing adequate medical care for people is to furnish the facilities. This plan has the

laudible provision, in the version of the bill passed by the Senate, that the federal government does not seek control of either the patient or the doctor. This is legislation we should all approve.

The Wagner - Murray - Dingell Bills (S-1050 and S-1606), were introduced in the Senate by Senator Wagner of New York and Senator Murray of Montana while companion bills (H.R.-3293 and H.R.-4730) were introduced in the House of Representatives by Congressman John Dingell of Michigan. This is an omnibus bill comprising social security compulsory health insurance, sickness benefits, public health works. It will provide medical care for 120 million of our 135 million people. It gives absolute powers of control to the Surgeon General of the Public Health Service under direction of the Federal Security Administrator. It will control patient and doctor aiike, and its provisions are at the discretion of the Surgeon General. It provides for grants and loans for hospitals and public health centers, for maternal and child welfare services. It provides grants to states for public assistance for needy individuals including medical care for such individuals.

This type of medical care is not free. The cost comes in the form of increased taxes. The cost is an 8 per cent tax on income, — 4 per cent on employer and 4 per cent on employee, — on wages up to $3,600.00 annually. The self employed would be taxed 5 per cent. The total would be an annual tax of about four billion dollars. The operation of the plan is to be centrally controlled in Washington. It would furnish, after its own fashion, medical services for 120 million people of the United States, and though the doctors would not be in uniform, they would be so regimented, by necessity of complying with the politically controlled form of medicine that it would, in reality, be true socialization of medicine. A bureau with approximately 300,000 employees would be the result of this plan. Regardless of what is said to soften the idea, the doctor and the patient would be controlled in many respects by the government, because the government would pay the bills, and no provision is made in S-1606 for divesting the central government of its control and putting the control in the hands of local agents, similar to that provided for in the Hill-Burton Bill. This is socialized medicine. It is Russianized medicine or Nazified medicine, both of which have been shown to be less efficient than even the open plan operating in the United States today.

Attempts at government control of medicine are very old, dating back in some forms for centuries. The Germans and Russians had socialized medicine before World War II. Notably the quality and quantity of their medical service was inferior to ours. Medicine in a state like Germany and Russia *must* be socialized. They operated on a different political theory, which we Americans generally do not like.

President Truman's National Health Program was read to Congress November 19, 1945. In it he stated, "I repeat what I am recommending is not socialized medicine. Socialized medicine means that all doctors work as employees of government. The American people want no such system. Under the plan I suggest our people would continue to get medical and hospital services just as they do now, — on the basis of their own voluntary decisions and choices." Under the Wagner-Murray-Dingell Bill all doctors or practically all doctors will work for the government controlled system — in essence they will work for the government and President Truman admits that the American people do not want that type of medical service. Again he said, "Medical services are personal. Therefore, the nationwide system must be highly decentralized in administration. The local administrative unit must be the keynote of the system." The Wagner-Murray-Dingell Bill provides for centralization so strong it could not fulfill the requirements of the President's National Health Program.

Wendel Berge, Assistant Attorney General of the United States, in an address advocating an expansion of medical services

in the form of a national health program said, "Support of the doctors is essential to the salvation of the movement. If doctors oppose or stand on the sidelines, the laymen will create a medical order which may prove to be indifferent or even blind to the values doctors prize most." Let it be known now that doctors individually and collectively oppose the creation of any such order as that advocated in the Wagner-Murray-Dingell Bill.

If not the Wagner-Murray-Dingell Bill, what then to ease the individual financial burden of sickness and bring better health facilities to more people?

The following expansion would seem a step in the right direction and would not create political medicine nor advance into the design of socialism or communism.

1. Construction of adequate facilities by measures such as those embodied in the Hill-Burton Bill.
2. Provision of transportation to bring the seriously sick to medical centers; centers where and only where, the more complicated diseases may be treated with the most modern methods.
3. An extended program for disease prevention with the development and extension of public health service.
4. The development and extension in all localities of voluntary or community prepaid sickness insurance plan.
5. Providing of medical facilities and other attractive inducements by smaller communities to stimulate the dissemination of more doctors in the rural areas.
6. The provision of hospitalization and medical care to the indigent by local authorities.
7. The system should not be under totalitarian control of Washington.

Civilian steps have already been started in these directions. One of the best and more magnanimous is the Blue Cross Plan which provides hospital care for a nominal fee to over 22 million Americans (16% of the population). The cost is fifty cents a month for an individual. The organization is non-profit and its operation requires very little overhead. Those insured in the Blue Cross Plan are entitled to thirty days' hospital care, operating room services, routine laboratory service; general nursing care, and a discount for 50 per cent on x-ray tests. The best doctors in the world cannot properly handle difficult problems without good facilities. There are many other factors in providing good medical care but the basis of it is modern facilities. The Blue Cross Plan could be extended to include everyone. A collateral expansion of this non-profit community sponsored Blue Cross Plan is one providing for surgical care. The cost is 75 cents a month and it provides maternity care and surgeon's fees according to a scale. In New Orleans beneficiaries have found that 97 per cent of the surgeons' fees are entirely covered by the plan. In Alabama a similar plan is in operation to provide surgical and medical fees.

Let us not regiment our doctors and patients, by giving the federal government control and say so of this part of their lives. Security or the false promise of it was made in Germany. They had socialized medicine. Security is not to be purchased by freedom. Government control of medical profession and patients is legal under such measures as the Wagner-Murray-Dingell Bill provides. The promise of security it offers is tempting; but when it has to be purchased with liberty as well as with tremendously increased taxes it becomes too dear and even abhorrent.

One would think that health is an individual and a national thing, that it is the province of government to see that each one is kept well for the good of the whole. What about bread and food? Proper nourishment of the individual also is essential for the good of the whole. If the federal government takes over the duty of providing medical care for the people, perhaps it should go back and provide food for all people by taxing the entire population and distributing the food. And what about justice? Certainly that is a basic right of each individual. Why should not the government take over the legal profession, tax the people, and pay each attorney what

is just for each of his cases? These thoughts are all analogous; they are un-American and it would appear that once initiated by law they would be an irrevocable step towards regimentation of the people in national totalitarianism.

Doctors know some changes are necessary in the program of medical service. These are necessary not in spite of them, but because of them. Doctors, and the advances in scientific medicine are responsible for all this change in medical care. They will welcome and help with the changes necessary to take good medicine to the people. Let us make these changes the American way from the people and by the people. Let us not make the medical profession a federal or political agency. By doing it the American way we will have better medical care and a medical order more vast and mightier than anything we know. Socialization and central control of medicine on the other hand will result in a deteriorization of medical service — directives, inefficiencies, requisitions and inevitably more unhappiness for doctors and patients. Let us defeat the Wagner-Murray-Dingell Bill and let each community's medical profession and citizens work to establish some local non-profit pre-payment insurance plan for sickness.

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FIVE YEARS' EXPERIENCE WITH ELECTRIC SLEEP (ELECTRIC SHOCK) TREATMENT*

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In the past few years there has been a marked increase in interest in the new technics used in the treatment of mental and emotional disorders. Analysis will show that mental disorders in the military service in World War II have been better treated than they were 25 years ago, but the problem of the sick and maimed veteran is going to be a major consideration for the next fifty years. That emotional disorders in the general population have greatly increased during the war years and since the cessation of hostilities in Europe and Japan is an established fact; however, the more malignant psychosis, such as dementia precox, has not shown much if any increase.

Fortunately, today we have better facilities than ever before for treating those mentally or emotionally ill. The greatest therapeutic achievement has been made in all forms of emotional disorders. You will recall that insulin treatment was introduced and extensively used eight or ten years ago, and it actually is of great value in some instances, particularly in schizophrenia. Following the wave of popularity enjoyed by insulin, the drug metrazol was introduced, but there are many drawbacks to this form of shock treatment, and though it accomplished much in a therapeutic way it has been almost entirely discontinued.

Electric sleep (electric shock) therapy has so many advantages over insulin and metrazol that it has almost completely replaced these forms of treatment .Electric sleep treatment is now being used in hospitals for mental patients throughout the world.

While electric sleep therapy is used to treat dementia precox and hysteria, it is of paramount value in involutional melancholia, reactive depressions, the depressions which are part of the manic depressive syndrome, and other emotional disorders. It is used in treatment of the excited phase of manic depressive syndrome but the results are not so brilliant.

Those patients who are slightly or mod-

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erately depressed do not come to you asserting they feel blue, melancholic, or downhearted; rather, they have complaints referring to various bodily functions, such as weakness, being easily fatigued, loss of appetite, anorexia, loss of weight, insomnia, peculiar feelings in the head, eye symptoms, tachycardia, palpitation of the heart, sex disturbance (especially loss of libido), and so on. The examining physican can usually get at the true state of affairs if he will ask the patient the direct questions: "Are you happy?" "Are you sad?" "What gives you pleasure?" When these questions are put to a melancholic patient he generally stops talking about his heart or stomach, and tells about his depression. Frequently the patient has had one or more similar attacks previously.

There are several well recognized types of depression or mental disorders in which the mood disturbance is of primary importance. They are:

(1) *Reactive depression, prolonged grief*: Here the patient is unable to recover from a bereavement or some other emotionally depressive experience, whereas on the other hand the average person would feel grieved but would soon be able to adjust and carry on. The patients we are discussing would for months or years continue to be deeply grieved and depressed and might cry most of the time. These patients respond brilliantly to electric sleep treatment, and recovery is almost 100 per cent.

(2) *The depressed phase of the manic depressive syndrome*: This represents a large percentage of people who are emotionally disturbed. There is often a history of previous attacks and more or less psychopathology in the family. This psychosis is looked upon as being due to some conditioning factor in the constitution of the patient, due in large part at least to hereditary influences. Electric sleep treatment restores these patients within a few weeks, thus saving the patient months of suffering while waiting for recovery which may take as long as one, two, or ten years. Suicide in these patients is always a real danger, and any shortening of the period of depression will lessen the risk of self-destruction.

(3) *Involutional melancholia*: This condition is frequently seen in women between 40 and 55 years of age, and in men between 55 and 65; however, it may occur later. Marked depression with agitation and self-accusatory delusions are present, and the patients are particularly apt to commit suicide. As a group, they respond well to electric therapy, recovery taking place in 70 to 90 per cent.

(4) *Presenile depression*: This usually occurs later than involutional melancholia and care must be taken to differentiate these people from those suffering with senile deterioration. Here response to electric sleep treatment is better than 70 per cent.

(5) *Psychoneuroses*: These as a rule do not respond well to electric sleep treatment unless depression is a major component in the disturbance. The obsessive compulsions and the tics do not do particularly well, though occasionally a person with hysteria will make a quick recovery after one or more treatments.

(6) *Depression associated with other diseases (as general paresis, tuberculosis, primary anemia, cardiovascular disease)*: These are well suited for electric sleep therapy, and brilliant results are often attained by helping these people over their depression. They are then able to cooperate in treatment of the primary disease.

While insulin, metrazol, and electric shock treatment were first used almost exclusively in dementia precox or schizophrenia, these treatments are tremendously more beneficial in the emotional disorders. We are still employing electric shock treatment and insulin in the treatment of dementia precox, and in early cases the results are better than by any other form of therapy. When the electric treatment does not give good results, a course of insulin treatment may be successful in greatly improving the patient so he is able to leave the hospital and return to his home. If he has a recurrence in a few years, he will probably

respond satisfactorily to a second or third treatment.

The use of metrazol has been almost discontinued, though some hospitals still employ it in certain cases. I believe we have not given metrazol in New Orleans for the past five years though we still use insulin in a restricted number of patients.

Contraindications to electric sleep therapy are few. Marked osteoporosis, malignancy, cardiovascular disease with decompensation, acute febrile reactions, are absolute contraindications; but cardiovascular disease where compensation is adequate, a not too recent coronary thrombosis, chronic tuberculosis, arthritis, organic brain disease, are not contraindications to this treatment, though undoubtedly they add to the risk. Patients with hypertensive cardiovascular disease, even where the systolic blood pressure is over 250, usually do very well under electric sleep treatment, for the hypertension is often the result of agitation and mental turmoil; as the patient improves, the pressure lowers and often becomes normal for the patient's age.

Chronic tuberculosis or old established tuberculosis with tubercular organisms in the sputum can be successfully treated when the emotional disturbance requires therapy. Curare is used in some instances to "soften" the muscular contractions but it seems to add some further risk.

Electric sleep treatment is not in itself dangerous, but when used in certain conditions there is some danger; but there is danger in all surgical procedures, and in fact, our every day life is beset with danger. I frequently tell a patient this treatment is as dangerous as riding 10 or 20 miles in an automobile, crossing a busy city street, or having two or three teeth extracted.

We have treated over 3,070 people with electric shock therapy and have given 27,231 treatments without a fatality. There actually have been considerably more patients treated with this therapy than I have recorded, especially at the Charity Hospital and the City Hospital for Mental Diseases, but reliable records from those hospitals were not available.

Complications do occasionally occur, the most common being dislocation of the jaw. This is usually reduced while the patient is relaxed by treatment; sometimes we have given a patient with a dislocated jaw a second treatment and reduced the dislocation as soon as he relaxed. Fractures of the body of the vertebrae occur, but these are not the serious injuries we associate with traumatic jack-knife fracture (fracture-dislocation of the spine), for here the spinal cord is almost always injured, whereas if there is a fracture of the body of the vertebra under electric sleep treatment the cord is not injured. There may be some pain on movement and on deep inspiration for several days, but it is not necessary to put the patient in a cast or institute bed rest for a protracted period; these patients do very well under simple treatment. The most disadvantageous result is that treatment for the time being at least must be discontinued; however, after a week or two it may be commenced again, under the quieting effect of curare.

In the large series of patients that we have treated, there have been a few fractures of the neck of the humerus, not more than two or three, and one of the neck of the femur, due to sudden muscle contraction. These have occurred in elderly patients who might have received a similar injury by slipping on the floor in their own home.

In all the patients we have treated in New Orleans, we have not had a fatality, and throughout the world, where several million treatments have been given, less than a dozen fatalities have been recorded. All these were people who had some complicating disorder, as brain tumor, syphilitic meningitis, advanced age, or hypertension —not one of the deaths occurred where treatment alone could be held responsible. There have been so few deaths that postmortem studies are entirely inadequate, and there has not been a postmortem on an individual suitable for study (one between 20 and 40 years of age, free of any other disease). We do not hesitate to treat elderly people, and have had to treat a num-

ber over 70 years of age, but we do not like to treat individuals of this age any more than you would like to perform an operation on the same person; however, these individuals are sick, and if anything is to be done for them the added risk must be accepted.

TABLE 1
ELECTRO-SLEEP THERAPY, DEPAUL SANITARIUM

Year	No. of Patients	No. of Treatments
1941	153	1,436
1942	217	1,963
1943	121	2,658
1944	501	4,937
1945	547	6,170
1946 (Jan. to Apr.)	171	1,799
	1,716	18,963

TABLE 2
ELECTRO-SLEEP THERAPY, TOURO INFIRMARY

Year	No. of Patients	No. of Treatments
1941 (11/41-12/41)	45	85
1942	192	878
1943	265	1,521
1944	302	1,750
1945	340	2,084
Clinic	50	350
	*1,194	6,668

* Approximately 90 per cent were "out patients."

TABLE 3
ELECTRO-SLEEP THERAPY, TOTALS

Hospital	No. of Patients	No. of Treatments
DePaul	1,716	18,963
Touro	1,194	6,668
Baptist (approx.)	160	1,600
	3,070	27,231

Undetermined number of treatments at City Hospital for Mental Diseases and Neuropsychiatric ward at Charity Hospital.

Tables 1 and 2 show the number of patients at DePaul Sanitarium and Touro Infirmary that have received electric sleep therapy and the number of treatments given. Table 3 shows the total number of patients and the total number of treatments.

DePaul Sanitarium is the only large private hospital in Louisiana for neuropsychiatric patients, the capacity of which is about 225. The "open" staff of the Sanitarium consists of a medical director and psychiatrists of New Orleans, and there are consultants in all other medical specialties. Statistics in this paper represent activities of the staff of the Sanitarium; opinions and conclusions are those of the writer.

TABLE 4
DEPAUL SANITARIUM, 1945

Admissions	713
Discharges	709
Condition On Discharge:	
Restored or much improved	621
Slightly improved	44
Unimproved	20
Expired	14

No deaths as a result of electric sleep treatment.

Table 4 shows the activity of the DePaul Sanitarium for 1945.

It is generally conceded that electric sleep treatment is particularly well suited for treatment of depressive states, though for the first few years after their introduction the various shock treatments were used almost exclusively in the treatment of schizophrenia. The results obtained in the treatment of this disease are better than by any other therapy, but on the whole, the prognosis in schizophrenia does not permit one to be too optimistic. On the other hand, the depressions respond brilliantly, and we can promise nine out of ten depressed people that they can be restored in three to four weeks; usually six to ten treatments are all that will be required.

TABLE 5
MANIC DEPRESSIVE PSYCHOSIS (189)

	Age Groups						
	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Manic	4	19	14	12	9	3	0
Depressed	4	14	20	27	29	9	3
Mixed	2	1	8	5	2	1	0
Circular	0	0	0	0	1	0	0
Totals	10	34	42	44	41	13	3

Table 5 shows the analysis as to age and type of disorder in the 189 patients suffering from manic depressiive psychosis.

TABLE 6
MANIC DEPRESSIVE PSYCHOSIS

Condition on Discharge	Restored or much Improved	Slightly Improved	Unimproved
Manic	60	0	1
Depressed	160	0	0
Mixed	18	0	0
Circular	1	0	0
Totals	187	1	1

Table 6 further breaks down this group. It is seen that of 189 patients in this group 187 were restored or much improved. These figures are actually too high, but they represent the conditions of the patients when discharged from the DePaul Sanitarium. The follow-up study which is to be undertaken will certainly show that the very high recovery rate was to some extent unwarranted.

TABLE 7
INVOLUTIONAL MELANCHOLIA (25)

Age Groups:	40-50	50-60	60-70
	8	4	13
Marital Status:	Married	Single	Widowed
	15	2	8

Sex:		Condition on discharge:	Much Improved or Restored	Unimproved
Male	Female			
5	20		25	0

Table 7 shows the results attained in 25 patients suffering from melancholia. Here again the condition on discharge may not have been a true picture, but granting a certain percentage of over-optimism the results as we saw them were very dramatic and heartening.

TABLE 8
DEMENTIA PRECOX (103)

Age Groups	10-20	20-30	30-40	40-50	50-60
Paranoid	1	21	15	11	4
Catatonic	1	10	3	0	0
Hebephrenic	1	7	6	6	0
Simple	3	8	6	0	0
Totals	6	46	30	17	4

TABLE 9
DEMENTIA PRECOX

Condition on Discharge:	Restored or much Improved	Slightly Improved	Unimproved
Paranoid	39	8	3
Catatonic	12	1	1
Hebrphrenic	15	5	0
Simple	16	3	0
Totals	82	17	4

Tables 8 and 9 shows the results obtained in 103 patients treated at DePaul Sanitarium during 1945.

We treated 14 patients in whom alcohol or drug addiction was the principal or contributing problem in the illness. Thirteen were apparently restored or much improved. A follow-up will throw some light on this group.

Certain selected patients suffering from marked psychoneurosis (32 individuals) were treated, and most of them greatly improved.

Electric sleep treatment has proved of great value when used "symptomatically." There are a certain group of patients, mostly schizophrenic, who can be greatly improved physically and mentally by an occasional series of electric sleep treatments. We give one treatment a week to an old lady who was a patient in a state hospital for five or six years; now, with the one treatment a week, it is possible for her to live with her son who is a physician in New Orleans and she is able to care for her grandchildren. When the treatments are discontinued, she soon becomes confused and deeply depressed and is then unable to do anything for herself or anyone else. For approximately three years she has, by the use of electric sleep treatments enjoyed a relatively normal life. Great benefit in other chronic patients has been brought about by the occasional use of this type therapy, and less restraint or sedation has been required.

CONCLUSION

(1) Electric sleep (electric shock) treatment is safe, particularly with patients who might be considered good surgical risks.

(2) Almost 28,000 treatments were given 3,070 patients, with no fatalities and relatively few dislocations or fractures, less than 10 per cent.

(3) All depressions should receive this form of therapy even when the psychosis is of several years' duration.

(4) In schizophrenia, better results are obtained through electric sleep treatment than by any other method; and the shorter the duration of the illness, the better the results. Insulin is superior to electric sleep treatment in certain cases of schizophrenia.

(5) Electric sleep (electric shock) treatment is valuable in maintaining certain chronic cases at a higher social adjustment than they could otherwise obtain.

I wish to express my appreciation to the Administration and Staff of the DePaul Sanitarium for their help and

cooperation; particularly am I indebted to Miss Elizabeth Haik, Librarian, for the research and study that she carried out.

DISCUSSION

Dr. Walter J. Otis (New Orleans): Brain stimulation and not brain destruction should be the aim in the therapy of most mental disorders.

It may seem strange that after spending many years in trying to stop convulsions we now help to produce a convulsive reaction.

Dr. Holbrook has brought to your attention the results of this particular type of therapy over a period of years, covering a number of treatments given to a number of patients, material having been secured from various sources with the kind permission of the neuropsychiatric group here in New Orleans. The inception of the electric sleep therapy was inaugurated in Louisiana at De Paul Sanitarium in January, 1941. The results have been most satisfactory and we are hopeful of a continuance in further cases presenting themselves for treatment. As has been told you the earlier they are presented to the neuropsychiatrist the better the prognosis. It is hoped that the physicians from a medical standpoint detect earlier any prodromal symptoms or syndrome which would lead them to believe that the patient is becoming a neurotic, psychotic or psychoneurotic, thereby availing themselves of one of the newer therapies being use with success.

J. P. Sanders (Shreveport): All of us have realized in the institutions with schizophrenics who have dropped down as low as human being can if you can raise their status to where they can feed themselves and bathe and go to the table and eat, it is a great help. There isn't any question about it, this is an enormous problem. If you can do that much for those it is a great help. Maybe as time goes on and we can have more work done in our grade schools and grammar schools in educating introverts, potential schizophrenics, maybe we will not have to enlarge our insane asylums.

Dr. R. H. Foster (Pineville): I would like to confirm what Dr. Otis and Dr. Holbrook have said about the benefit to the schizophrenic patient in State Hospitals. At the Central Louisiana Hospital we have been using this treatment for four and a half years. A number of schizophrenic patients responded quite well. The various types of depression nearly always recover from shock treatment, and are able to leave the hospital. The first case treated showed a surprising recovery and improvement. She was a catatonic praecox, who had not talked, nor eaten by herself for more than four months. Soon after treatment was started she began to talk and eat and rapidly recovered and was paroled. Later she had a relapse and shock treatment this time did not help her. She was put on sub insulin shock treatment and recovered again and has now been out of the Hospital about three years. Another advantage of shock treatment, as has been brought out, is the applicability in ambulatory cases. There is no doubt that early treatment is most valuable, and this is where we are handicapped in the State Hospitals as we do not get these patients until everything else has been tried, and many times the true mental condition has not been recognized.

In the involutional cases, prior to electric shock, we relied on stilbestrol, but it was not very efficacious. With electric shock treatment practically all of these patients recover.

Dr. N. F. Thiberge (New Orleans): I should appreciate it if Dr. Holbrook would give us in some detail how treatment is applied. Most of us are not familiar with the method used.

Dr. Joe Holoubek (Shreveport): In cases of alcohloics with major depressive states, I wonder if you will compare the electric shock treatment with the ordinary psychiatric treatment of alcoholics. We know that many of these patients are emotionally immature and I wonder if this treatment is better than psychotherapy or psychoanalysis in the chronic alcoholic.

Dr. Charles S. Holbrook (in closing): For many years it was demonstrated that small amounts of electricity applied to the brain surface produced certain responses to those motor areas which could readily be defined. If a larger amount of electricity were used, the animal tested might have a convulsion. No clinical use was made of this application of electricity until quite recently. For eight or ten years insulin and metrazol were used to treat patients with mental disorders, and the principal immediate effect of the use of these drugs was the induction of a convulsion, and especially was this true of metrazol.

Treatment with insulin and metrazol had many objections and considerable risk for the patient could not be escaped. Electricity was then employed to produce the same results that were obtained from the employment of the two drugs mentioned. This method has come into general use in all our well regulated psychiatric hospitals. Seventy to 150 volts are applied to the temples for 1/10, 1/20, or 1/2 second, producing immediate loss of consciousness and a convulsion which lasts 35 to 45 seconds. The patient often goes into a deep sleep and may be confused and restless for a time. In experimental animals the safety margin is about 500.

Many patients are treated as "out patients." They report to one of the hospitals about eight o'clock in the morning and are back home by nine-thirty or ten o'clock. Some men even go to their work in the afternoon, though this is not recommended.

Patients do not dread the treatments, and if they should begin to feel another period of depression developing, they come and ask to be given more treatments.

While we have given over 28,000 treatments, we

have never had a death resulting from this therapy. There have, however, throughout the world, been some 12 or 13 deaths, but these occurred in people who had something else (brain tumor, high blood pressure, advanced senile changes, or some other serious complication) wrong with them. Postmortems have been extremely few and no suitable studies have been made because death has not occurred in a patient without complications. The most suitable type of patient would be one between 20 and 35 years of age, in good health, and free of complications. No patient like this has died as a result of electric sleep (shock) therapy.

I usually tell the families of my patients that there is some risk to this treatment, as there is to almost anything, but the danger is no greater than driving ten miles in an automobile, crossing a busy street, or having a couple of teeth extracted.

When it comes to alcoholics, we are not so sure of our ground. Insulin was first introduced into psychiatry because it was used in the treatment of alcoholism, and it was observed that after these individuals were treated they experienced some change in personality and often seemed much improved. Shock was then used in the treatment of dementia precox, and later in treating patients with depression. In the latter group we have achieved brilliant results. While electric sleep (shock) is sometimes used in alcoholism, we do not consider it the treatment of choice—I prefer to use "condition reflex treatment" and if patients wish to be helped, a great deal can be done for them by this form of therapy.

Electric sleep (shock) treatment is especially beneficial in the treatment of all kinds of depression, and it is really a godsend to these patients, as they frequently recover in a few weeks from a disorder which might otherwise run many months or even years and might drive the patient to suicide.

THE USE OF BIOPSIES IN THE DIAGNOSIS OF CANCER*

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One of the most encouraging developments in cancer control during the past twenty years has been the steady and rapid improvement in the efficacy of treatment. Most patients with cancer can now be offered an encouraging prognosis if the disease is discovered and treated in its early stages. Modern surgical and radiologic methods can effect a five-year cure in more than 70 per cent of the early cases of carcinoma of the skin, lip, breast and cervix and in a very good proportion of other malignant lesions. If cancer is neglected in its initial stages and allowed to progress untreated the patient's prognosis rapidly deteriorates. Once metastases have taken place the chances of cure become remote. Warren and Hoerr,[1] in a study of over 500 cases of carcinoma of the skin, showed that the size of the lesion at the time of treatment was more important than any other factor in determining the prognosis. In patients with lesions measuring less than one centimeter in diameter the mortality rate from cancer was only 7 per cent as contrasted with a mortality rate of 82 per cent in patients with later lesions measuring five centimeters or more in diameter. In this country approximately one of every ten deaths is a direct result of malignant disease. Without any improvement in present methods of therapy this toll could be cut in half by early diagnosis and prompt, adequate treatment.

One important factor which contributes to the delay in the diagnosis of cancer is that the early lesions are often insignificant in appearance and seldom cause distressing symptoms. Patients often postpone a visit to the physician until the disease has progressed beyond the curable stage. The present campaign in Louisiana and other states to reduce the death rate from cancer is being directed almost entirely toward the general public. People are being urged to seek medical advice at the first appearance of any abnormal tissue mass, any unexplained bleeding or any ulcer which does not heal in a reasonable time. If this campaign is effective, physicians may expect to see more patients with minor lesions of questionable nature and will face the responsibility of making a prompt decision as to whether each lesion is benign or malignant. Clinical judgment may not be adequate to this task but pathologic examina-

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tion of a representative piece of tissue will usually reveal the nature of a malignant growth while it is still small, localized and curable. Improvements in the surgical and radiological treatment of cancer have further increased the need for pathologic diagnosis. It is not enough to know whether a growth is benign or malignant; the choice of treatment may depend on the type of neoplasm and to a certain extent on the histologic grade of malignancy. Pathologic diagnosis is so firmly established as an essential part of the proper management of suspected malignant disease that there is no need to discuss its advantages. There are, however, a number of disadvantages and shortcomings which serve to discourage some physicians from making full use of this important diagnostic aid.

One of the most serious disadvantages of biopsy is its cost. Reliable pathologic diagnosis requires the services of a skillful physician to remove the tissue, a good technician to prepare the slides and a competent pathologist to interpret them. The procedure is neither simple nor inexpensive and these are serious disadvantages. Patients who fail to appreciate the consequences of delay in the diagnosis of cancer may be reluctant to incur this expense.

Biopsy, being a surgical procedure, cannot be regarded as completely without danger to the patient. However, the direct operative risk is minimal. The surgical hazards are similar to those encountered in other operative procedures and include reactions to local or general anesthesia, infection at the operative site and hemorrhage. Hemorrhage is particularly apt to be a problem in fungating tumors of the cervix where the biopsy is taken from a mass of tissue too friable to retain hemostatic clamps or sutures. The same difficulty may be encountered on incising any soft or necrotic tumor mass which is too large for total excision. Biopsies on growths of this character are best done in a hospital, but biopsies of most superficial lesions can be done safely as a part of regular office practice.

A more serious criticism arises from the possibility that cutting into a malignant tumor may favor metastases, accelerate the local growth or disseminate tumor cells in the surgical incision. Hellwig[2] has reviewed the extensive experimental and clinical literature bearing on these problems and although he found no unanimous agreement it appears that the dangers are more imagined than real. Incision of a malignant neoplasm which is growing under tension may accelerate local growth but it is doubtful that clean incision with a sharp knife has any important effect in favoring metastases. In animal experiments massaging or squeezing neoplasms has resulted in early widespread metastases[3] while biopsy has had no significant effect.[4] It is quite probable that metastases in human cancer are much more likely to result from rough examination or vigorous palpation than from diagnostic incision. Reasonable precautions should be taken to prevent seeding of the surgical wound with cancer cells at the time of biopsy, but even if surgical technic is faulty in this respect, a pathologic diagnosis can be obtained within a few days and appropriate treatment instituted before tumor implants can make much progress. If surgical extirpation follows biopsy the entire biopsy wound should, of course, be excised with the surgical specimen.

Whenever a mass suspected of being malignant is accessible and of reasonable size it is preferable to remove the whole mass as a block to avoid the potential hazard of breaking into malignant tissue. This applies particularly to the removal of enlarged lymph nodes or nodules in the breast. In cases of suspected carcinoma of the skin excision of the entire lesion with adequate margins of normal tissue may accomplish both diagnosis and treatment in a single operation.

A proper use of pathologic diagnoses in the management of patients with cancer depends to a large extent on the clinician's familiarity with the pitfalls of the diagnostic method. A positive diagnosis of cancer made by a competent pathologist carries a very high degree of accuracy and is often the only means of establishing a diagnosis

with any certainty. This is particularly true in early, curable lesions. A negative report on a biopsy is a very different matter. It by no means rules out the possibility that cancer is present but only indicates that no malignancy was found in the tissue submitted. Many cancers undergo extensive necrosis and frequently become secondarily infected. A small specimen taken from a tumor mass may actually consist only of necrotic debris or inflammatory granulation tissue. Sometimes a piece of normal tissue overlying a tumor nodule is submitted as a biopsy and the pathologic report is disappointing to the clinician. This accident is frequent in biopsies of lesions which undermine and elevate normal mucous surfaces as is often the case in carcinoma of the rectum or sigmoid. Here the obstructing lesion, as viewed through the proctoscope may be almost entirely covered by inflamed but non-malignant mucosa and a superficial biopsy will naturally be reported as showing no carcinoma. The accuracy of biopsy diagnosis depends as much on the care with which the tissue is selected and removed as it does on the skill of the pathologist.

Another point worth stressing is that pathologic diagnosis of tumors is not an exact science. It is similar in many respects to the process of clinical diagnosis and involves the weighing of evidence and the exercise of judgment. A pathologist serves as a medical *consultant* rather than a technician. Some surgeons still believe that they will get more reliable pathologic opinions, free of all prejudice, if they submit their tissue specimens to the pathologist without including any clinical information. The same men would feel hurt if they were called in consultation by an internist but were denied access to the clinical history or laboratory data. The purpose of supplying the pathologist with clinical data is solely to improve the accuracy of diagnosis. For example, the callus of a normally healing fracture can simulate very closely, under the microscope, an osteogenic sarcoma and a pathologist who is not on his guard can make a serious blunder. Metastatic carcinoma of the thyroid gland may reproduce almost perfectly the structure of normal thyroid but if the pathologist knows that the tissue came from a nodule in the skull he can make a useful diagnosis. A frequent problem in pathology is to detect metastatic carcinoma in lymph nodes. The tissue submitted is often scanty but the presence of epithelial cells in a lymph node is strong evidence in favor of carcinoma. Epithelial cells are not normally present in a lymph node but in a tonsil the structure of a lymph node is fairly well imitated and the surface and crypts normally carry a layer of epithelial cells. Without laboring the point it is easy to appreciate that although a clever pathologist can usually guess the source of a tissue and sometimes even the approximate age of the patient, such guesswork does little to improve the objectivity or accuracy of his diagnoses.

In this connection, I would like to make a point which is difficult to state fairly. Pathologic diagnosis is a valuable adjunct to clinical diagnosis but it is no substitute. If the pathologic report is obviously inconsistent with the clinical features of a disease it is a mistake to accept the pathologist's word as final. A second biopsy or a personal conference between the clinician and the pathologist will often clear up the difficulty. In the final analysis the clinician is still responsible for the diagnosis and care of his patient and the pathologic diagnosis should be treated only as an opinion, based on substantial evidence of a fairly trustworthy nature and not as final and irrevocable fact. It is quite obvious but somehow difficult to remember that the pathologist bases his diagnosis only on tissue removed from the patient's body while the clinician has to fear only the tissue remaining in the patient. A biopsy of the breast may be reported correctly as showing only intraductal hyperplasia but cancer may be present in another portion of the same breast.

Another common source of misunderstanding is the "equivocal" pathologic report. A surgeon may have gone to a great deal of trouble to obtain a biopsy and may

have given his patient to understand that a definite diagnosis will result. His feelings are understandable when the report comes back, "Atypical epithelial hyperplasia, not diagnostic of malignancy." Such a report should be taken at its face value. It does not indicate that the pathologist is ignorant or uncooperative. It usually means that he is honest—he does not know—and is not afraid to say so. Conscientious pathologists realize the weight which is placed upon their reports and are conservative in making a serious diagnosis on insufficient evidence. I do not mean to suggest that pathologic reports should be ignored or discredited but only that they should be used intelligently, in conjunction with other evidence, in reaching a clinical diagnosis.

Turning to the more practical aspects of tumor diagnosis by biopsy a few points of technic are worth mentioning. Well preserved tissue is necessary for accurate interpretation and as soon as the specimen is removed from the patient it should be dropped into a jar of 10 per cent formalin or some other suitable fixing agent. Tissue which is partially dried, poorly fixed or decomposed is distorted and unsatisfactory for diagnosis. Similar distortion results from the removal of small biopsies with an electric cautery. The tissue margins are shriveled and burned beyond recognition. It is better to remove the tissue with a knife and then apply the cautery to the wound margins if necessary. When small skin lesions are excised for diagnosis it is often wise to remove the whole lesion. Most surgeons appreciate the importance of excising an adequate margin of normal skin about a lesion suspected of being malignant but they frequently fail to dissect deeply enough. The pathologist often discovers that cancer extends entirely through to the deep surface of a specimen and he must presume that some tumor cells have been left behind in the depths of the wound. In dissecting out enlarged lymph nodes for diagnosis the surgeon often encounters a group of nodes. Metastatic carcinoma may involve only one or two nodes in the group. The largest node is the one most likely to contain tumor and even though it may be more difficult to remove than a smaller node it is more likely to yield a reliable diagnosis. Inguinal lymph nodes are notoriously prone to show chronic inflammatory changes and fibrosis even in normal persons. In patients manifesting generalized lymphadenopathy the inguinal nodes are the least desirable for pathologic diagnosis.

A number of technics have been developed to simplify the process of obtaining tissue for pathologic study. Among these are the punch, aspiration or needle biopsy of such structures as the prostate and superficial lymph nodes and even of the lung, spleen, and liver. From the pathologist's point of view such biopsies may be adequate to justify an unequivocal diagnosis but often only a tiny shred of distorted tissue is available for examination and no positive report is warranted. Aspiration biopsies often give valuable information but are much less dependable than open biopsies.

Examination of peritoneal or pleural fluid and smears of bronchial or vaginal secretions may reveal malignant cells. Here the pathologist must rely on the characteristics of individual cells or small groups of cells. A diagnosis of cancer based on such evidence is less reliable than a tissue biopsy and failure to find malignant cells has little weight in ruling out the presence of cancer.

Frozen section diagnosis represents a great advance in the practical usefulness of biopsy. While the patient is on the operating table tissue can be removed and a section made, stained and examined within five to 10 minutes. The appropriate treatment can then be instituted without delay. In experienced hands frozen section diagnosis carries a high degree of accuracy but is still somewhat less dependable than diagnosis by routine methods. The slides are of relatively poor quality, the pathologist's decision is hurried and the surgeon must expect a higher proportion of equivocal reports.

Taking into account all the imperfections

inherent in the pathologic diagnosis of cancer, biopsy still remains an indispensable and highly trustworthy method of determining the true nature of lesions suspected of being malignant. Pathologic examination of a representative piece of tissue will yield a definite diagnosis in the great majority of instances and there is no other method of distinguishing many benign lesions from early malignancy. Greater use of biopsies both in general practice and in the medical specialties will do much to decrease the death rate from cancer. No physician can escape the duty of prompt diagnosis of early cancer since here as in no other disorder "the more obvious the diagnosis the more hopeless the prognosis."

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DISCUSSION

Dr. Howard Mahorner (New Orleans): This paper is so important from the clinical standpoint that I can not resist the temptation to say something about how a surgeon feels toward a pathologic diagnosis, particularly one made on frozen sections. Many times the surgeon is put in the position of determining his action on the diagnosis of a biopsy. He must get back the diagnosis rapidly and must act on it rapidly. In medical centers, particularly, the most scientific method should be used to give that patient the best; and that means for lesions of the breast, lesions of the thyroid and lesions of the stomach, we know immediately whether there is a malignancy or benign lesion. Many times a small tumor of the breast is removed which is clinically benign and it turns out pathologically to be malignant. The only fair thing to do for the patient is immediate radical operation. Under less modern conditions, that is, having to wait three or five days to have sections come through, the patient's chance for recurrence is increased. What I say may not enhance the pathologist's own opinion of his importance in the operating room. But I have the highest regard for the part the pathologist plays in determining what is done for that patient and I hope more and more pathologists will realize how much we rely on them, to tell us what to do for the patient. One of the most significant parts of this paper to me was that diagnosis of a biopsy is a consultation and not a laboratory procedure.

Dr. W. H. Harris (New Orleans): After a comprehensive and scholarly paper such as Dr. Dunlap has presented, there is little, if anything, for me to add.

Those of us who have occasion to receive biopsies mailed from remote areas are very often even more seriously confronted with what both Dr. Dunlay and Dr. Mahorner have indicated, namely the factor of a biopsy's primary purpose, which is consultation. We often receive minute specimens with no history and at times not even specified as to the area of removal. Not infrequently we are asked to wire a report. Under these circumstances where we can not readily communicate with the physician because of distances, such conditions are certainly not constructive, or to the best interest of the patient. A pathologist is pleased to do all within his capacity and especially happy to give encouraging information as rapidly as possible. It is naturally, however, exceedingly dangerous to make commitments where insufficient and essential data are not available. If, of course, the histologic picture of the specimen received is specifically and definitely malignant, one does not hesitate to give a telegraphic reply any more than for rush sections at the time of operations.

I am satisfied that with fixed tissues, frozen sections can be properly prepared and made for permanent record. There are, of course, various methods of staining frozen sections and it is quite possible, with a reasonable amount of care and a proper microtome to obtain frozen sections that will compare reasonably well with paraffin sections. It is needless to add that properly prepared sections embedded with paraffin or celloidin offer the best cytologic study and permit of special stains.

Some twenty-five years ago I had occasion to publish upon "The rush section as an aid to the surgeon." This occurred during the very active period of the former Presbyterian Hospital in New Orleans with a staff of such men as Drs. Parham, Denegre Martin, Jeff Miller, Clark and many other active men. Numerous rush sections were requested. In the preparation of rush sections a thin celloidin coating and rapid staining with the standard H & E method gives a very satisfactory slide for diagnoses.

I did not hear Dr. Dunlap allude to the subject of "potential malignancy." Such, of course, is a very loose term and often the surgeon asks "is it or is it not malignant?" However, if the pathologist considers that the histologic changes present a picture justifying the term potentially malignant, I feel that this forms a warning to the surgeon to observe carefully not only the reparative progress but the periodic postoperative progress.

I feel Dr. Dunlap's paper is a timely reminder of an important subject during this "high pressure" period wherin the expectancy from the pathologist remains great and the realization of coordination by clinician is apt to be overlooked. I

have certainly enjoyed his excellent presentation.

Dr. G. H. Hauser (New Orleans): Just a few words to emphasize some of the important points which Dr. Dunlap has covered in his excellent presentation. In tumors that can readily be palpated, such as tumors of the breast, great care should be taken to avoid manipulation and undue pressure, which have been shown to be of far greater danger than section of a portion of the tumor for examination. It must also be remembered that a negative biopsy may be of little or no significance, especially in growths which are not readily accessible, such as tumors of the bronchi, larynx, or esophagus. Rush biopsies, in addition to their diagnotic value, can also greatly assist the surgeon in determining whether the edges of tissue about the growth are free of malignancy. This is of special value in malignancies involving the skin or superficial tissues, and also in benign growths which, if not entirely removed, may become malignant with recurrence of the growth.

Question—In smears, what do you consider characteristic of cancer, for example, the finding of epithelial cells?

Answer—That is a difficult question to answer. The recognition of malignancy is not a simple matter even in tissue sections and not something to be explained in a few words. Some one put it as being very much like recognizing one's grandmother—she would be hard to describe perfectly, but one can still recognize her.

In the diagnosis of smears we are up against the problem of recognizing cancer from the cytologic features of single cells. We must know the cells normally present in fluids from the different body cavities and note the presence of any abnormal cells. If an abnormal cell has a relatively large or irregular nucleus and scanty cytoplasm we are suspicious. If we are lucky enough to get a group of abnormal cells there is sometimes a mitotic figure or two in that group.

At best, I think the method of smear diagnosis of cancer is open to considerable error and should not form the only basis for a very radical surgical procedure unless it is confirmed by a second smear or biopsy and is in good keeping with the clinical features of the case.

CARCINOID OF THE APPENDIX WITH METASTASIS

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To retrace the historical background of carcinoids is not the purpose of this study, since Forbus stressed history in his excellent management of this subject in 1925. Rather will this report add to the ever increasing number of cases which suggest that carcinoids metastasize and are potentially malignant. Herein are presented three cases in which metastasis occurred.

To obtain a sizable number of cases on which to report, the records of Charity Hospital in New Orleans were surveyed for the years 1910-1945 inclusive. During that period there were filed 23 cases of carcinoids, all of which were of the appendix. The records at Mercy Hospital in New Orleans revealed six such cases between 1920 and 1945, also of the appendix.

In 1910 Huebschmann pointed out the similarity between the cells of carcinoids and those in the crypts of Lieberkuehn. His findings were further substantiated by Grosset and Masson, who brought out the fact that both of these groups of cells had a great affinity for silver compounds.

The belief that the cells discovered by Kultschitzky and named for him give rise to carcinoids is now indisputable. These cells are distributed throughout the intestinal tract: sparcely in the stomach and the colon; and in great numbers in the duodenum, jejunum, ileum, and appendix.

The origin of these argyrophilic cells has been a topic of disagreement among those who have shown interest in this subject. Raiford early postulated that they arose from ectoderm, and were to be found associated with nerves; further, that they had qualities common to other cells that arose from ectoderm. Danish's work on the chick embroyo showed that carcinoid cells arose from chromaffin tissue of the sympathetic gangelion, which in turn arose from ectoderm. They arranged themselves in rosettes similar to those of the neuroblastoma.

Masson supported the hypothesis that they arose from entoderm, since they were found in close association with the mucal glands. However, such an hypothesis is refuted by the fact that these cells do not appear in the mucosa until the third or fourth fetal month. Kull concluded that these cells arose from mesoderm and migrated to rest in the mucosa, which indeed sounds plausible.

INCIDENCE

These tumors occur more frequently in the appendix than in any other part of the intestinal tract. Porter and Whelan found that they occurred twice as frequently in the appendix, and that they were found in 0.2 per cent of the appendices they removed. Raiford stated that 85 per cent of carcinoids occurred in the ileocecal area. Jones believed they were found five times more frequently in the appendix as in the small intestine. Forbus stated that carcinoids were found to occur in 0.4 per cent of all appendices removed by operation. Raiford reported that 0.18 per cent of all tumors of the gastrointestinal tract were carcinoids. In a review by Simon of 139 cases, 77 per cent of the tumors occurred at the distal third, 14 per cent in the middle third, and 7 per cent at the base; 2 per cent involved the entire appendix. Of 40 cases reported by MacCarty and McGrath, 70 per cent occurred at the tip. During the periods surveyed in the records of the two hospitals mentioned above, I found no cases of carcinoids outside of appendix. Of the seven cases of carcinoids of the appendix in which the location was described, six arose at the tip and one at the base.

RACE, AGE AND SEX

Carcinoids of the appendix have been found most frequently in young individuals, averaging about 25 years of age, according to Raiford; and carcinoids of the other parts of the intestinal tract occur in individuals at about 55 years of age. This difference he explained by the fact that carcinoids of the appendix produced symptoms of obstruction sooner than the larger portions of the intestinal tract.

In the group of cases surveyed for this study 20 of the 29 cases occurred in persons between the ages 11 and 30. The oldest patient was 56 years old and the youngest was eight, the average age being 28 years, as compared with Raiford's average of 35 years for all carcinoids, and 25 years in his group of carcinoids of the appendix. In the local hospital survey the white patients accounted for 14 and the negroes for nine cases in the hospital where mixed admissions occurred; there were six cases in the hospital admitting only white patients. In the total group there were seven white males and thirteen white females; there were no negro males, but nine negro females. Thus, females accounted for 22 or 76 per cent of the entire group. In considering the various groups reported on, one might state that the females predominated over the males by a slight margin. However, that margin is diminished when one takes into account the greater prevalence of appendectomies among females due to pelvic surgery.

Although it is the opinion of Oberndorfer and Forbus that carcinoids are benign tumors, other very convincing evidence has been offered that they metastasize. Raiford reported that six cases of carcinoids found in the gastrointestinal tract outside the appendix were all malignant with evidence of metastasis. Cooke reviewed 104 cases of carcinoids of the small intestine; 48 proved to be malignant and showed metastasis. These findings were questioned by Raiford because the author did not state whether all the examined cells thought to be malignant had shown an affinity for the silver stain. Wyatt demonstrated that among six cases listed as carcinoids of the colon which he examined, three showed evidence of malignancy. In carcinoids of the appendix the path of metastasis is most frequently through the lymphatics to the regional nodes, as reported by Gaspor; and occasionally to the liver as reported by Gubitz. However, Marangas believes it is by infiltration of the blood vessels.

The cases studied in this survey brought to light the following facts. Diagnosis of these tumors is not made until the tumors have been inspected, often only by a pathologist. Among the cases where there was no metastasis only one surgeon made the diagnosis: in this case the tumor was large enough to palpate and had begun to involve the cecum. In only six of the cases diagnosed by a pathologist was the nodule identified beneath the submucosa and not apparently attached to the surrounding tissue. When they were sectioned, the cut surface

presented a yellowish appearance. The size of the tumors varied from a few millimeters to centimeters. In some instances it is reported they produced an anular lesion simulating a carcinoma. Although these tumors sometimes occur in multiplicity there were no cases in the group under consideration where more than one tumor was identified. In the three cases reported as being malignant, metastsis occurred in the lymph nodes, in accordance with the findings of Gaspor and Raiford. A fibrous capsule surrounded the tumor, suggesting a host reaction.

The statements that carcinoids of the stomach are apt to become malignant more so than those of the appendix is erroneous. Those of the appendix become malignant and show their power of infiltrating the layers of the intestine, but before these tumors can cause further damage clinical manifestations of appendicitis arise, and they are extirpated. They are encountered in autopsy material of aged individuals with no more evidence of malignancy than those seen during routine appendectomies.

In ten of the cases herein reported the carcinoids had begun to infiltrate the tissue beyond it, and the serosa showed evidence of involvement. Carcinoids were associated with 14 cases of acute, or gangrenous appendicitis, 13 with obstructive appendicitis, causing recurrent pain. There were three cases in which there was a full-blown peritonitis resulting from ruptured appendix and in which a carcinoid played an important role.

The following three cases show definite evidence that the metastasizing lesion arose from a carcinoid of the appendix. They are taken from the hospital records already referred to:

CASE NO. 1

V. L., a negro female, 56 years of age, had been ill for one week prior to hospitalization, complaining of nausea, vomiting, distention, and fever. Examination revealed a tenderness and rigidity of the abdomen in the lower right quadrant. A diagnosis of appendicitis, with possible peritonitis, was made. Upon exploration a gangrenous, ruptured appendix was found with a large tumor involving the tip and fixed in the retroperitoneal tissue. The regional nodes were enlarged. The tumor, appendix, and nodes were removed. The pathologist returned a report stating that the rupture through the distal part of the appendix was due to a carcinoid tumor; the retroperitoneal tumor and node were malignantly related to the carcinoid and all the tissue examined took the silver stain.

CASE NO. 2

M. H., a negro female, 25 years of age, complained of pain in the lower right quadrant, with nausea and vomiting, which had been getting progressively worse for the preceding ten days. A diagnosis of acute appendicitis was made. Exploration revealed an acutely inflamed appendix with markedly enlarged mesenteric nodes. The appendix and the nodes were removed. The pathologist's report was: Carcinoid of the tip of the appendix with invasion of the neuroblastic cells into the submucosal and muscularis layers. The lymph nodes were infiltrated by cells that were morphologically related to carcinoids and which took the silver stain.

CASE NO. 3

C. B., a white female, 44 years old, entered the hospital complaining of pain in the lower right quadrant of the abdomen, particularly after eating. During the last few days she had become much worse. A diagnosis of subacute appendicitis was made. The appendix was acutely involved and was bound down by adhesions. Considerable difficulty was experienced upon delivering it. The pathologist's report was: Subacute appendicitis with a carcinoid obstructing the lumen at the junction of the distal and middle thirds. Four months later the patient was readmitted. She presented a mass in the epigastric area. Exploration revealed a great deal of fluid in the abdominal cavity. There was generalized seeding of the peritoneum and its contents. The pathologist's report was: Carcinoid involvement of the nodes.

SUMMARY

Twenty-nine cases of carcinoids were gathered in this survey, all of which were of the appendix. Three of these cases showed evidence of metastasis. There were ten cases that showed infiltration of the serosal layer.

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OTOLARYNGOLOGY IN GENERAL PRACTICE*

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We are living in a rapidly changing medical world. Progress in medicine has always been steady and certain but slow except on the occasion of the introduction of some valuable new diagnostic or therapeutic agent and then the changes become sudden and startling.

In otolaryngology a revolutionary change occurred in 1884 when the discovery of cocaine ushered in the specialty of rhinology by making possible painless intranasal procedures. Most of the early procedures have been abandoned or remodeled and many new ones have been introduced, but cocaine is still the number one drug on the rhinologist's table.

In modern times a similar abrupt revision of our therapeutic measures occurred with the introduction of the new antibiotic agents. The first major effect observed in clinical otolaryngology with chemotherapy was the elimination of most of the acute mastoid surgical procedures and since then miraculous cures have been reported in the more serious complications of all types of infections including cases of cavernous sinus thrombosis, a disease which formerly carried a 100 per cent mortality tag.

Along with the glowing reports of the achievement of the sulfonamides come the reminders that the drugs are toxic and the results of their use are often serious. More and more physicians are becoming aware of the dangers of indiscriminate and uncontrolled sulfonamide therapy. Davisohn,[1] pathologist at the Chicago Mount Sinai Hospital, recently sounded a note of warning against such practices and feels that even though certain compounds seem less toxic in some conditions they are all potentially toxic agents and may cause serious injury.

The toxic effects may be due to direct action of the drug on tissue or to hypersensitive reactions. They may be prompt, accelerated or delayed. The prompt or accelerated reactions occur mostly in patients who have received sulfonamides previously, the interval being days, months or even years.

Damage to the blood may affect one or more elements. Four conditions are observed. They are hemolytic anemia, leukopenia, thrombocytopenia and leukocytosis.

Hemolytic anemia may develop slowly, appearing late in the course of therapy or rapidly with a drop of red cells to the neighborhood of one million in 12 hours. In the severe acute type death is due not to the anemia proper but to renal failure. In these cases plasma is given to prevent shock and transfusions to restore blood values.

Sulfadiazine is less likely to cause hemolytic anemia than the other compounds but regardless of the drug used it should be discontinued if certain symptoms develop such as nausea and dizziness, pallor, fever, anemia, leukocytosis, increase in reticulocytes and renal disturbances.

Sulfathiazole is the least likely to cause leukopenia. This condition may occur with or without granulopenia. Agranulocytosis as a complication of the sulfonamides is less likely to prove fatal than the same condition caused by amidopyrine, the drug which caused so many deaths a few years ago. The white count should be checked in all cases and treatment stopped if it drops to 3500. The clinical picture shows

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a sudden turn for the worse with the appearance of ulcerative lesions in the oral cavity and on the mucous membranes and in extreme cases the prognosis is bad. Transfusions are given as are injections of pentnucleotide and liver extract with ample fluids.

A number of cases of thrombocytopenia with purpura have been reported, the complication appearing early or late with a bad prognosis.

Leukocytosis with a count of 50,000 to 100,000 is occasionally seen and may appear concurrently with an acute hemolytic anemia.

Other conditions observed by the pathologists are periarteritis nodosa, all grades of hepatic damage, including cases of acute yellow atrophy with fatal outcome, and various types of kidney disorders.

Along with an understanding of the toxic reactions caused by the sulfonamides, the seriousness of their masking effect should not be overlooked. It should be known that even though mastoid surgery in acute cases has diminished, the serious complications of acute otitis have increased and these are observed at the autopsy table.[2] Symptoms which formerly guided the physician along the course of the disease are now clouded or masked entirely by intermittent doses of the sulfa drug. Now a child with a beginning ear infection receives sulfadiazine or one of the other compounds for a few days and the symptoms promptly disappear. The treatment is discontinued and the disease progresses. The drug is again prescribed, perhaps by a different physician. This routine keeps up while the infection travels quietly into the cranial cavity with a resultant meningitis or brain abscess. In the pre-sulpha days, drainage would have been established at the proper time in many of these cases through the ear drum or the mastoid cavity and the more serious complication would have been forestalled.

EARLY RECOGNITION OF CANCER

Early recognition of cancer is undoubtedly a manifestation of the highest type of diagnostic acumen and a physician with capabilities in this direction is one who is able to render a service of immeasurable value to his patients.

Unfortunately, most individuals are inclined to overlook or neglect the early symptoms of malignancy. They have a false impression that cancer is always associated with pain. This is, no doubt, due to their familiarity with suffering of those in the terminal stages. Because of this, they are apt to lose several valuable weeks or months while they ignore small superficial lumps, sores, enlarged glands or vague feelings of discomfort. Often the presenting symptom is an unnatural bleeding from one of the orifices of the body or a disabling functional disorder.

In the ear, nose and throat, early diagnosis of cancer is not difficult for one accustomed to examine these fields and who at the same time is cancer minded.

The oral cavity is readily accessable to direct inspection and palpation, the larynx indirectly with the aid of a mirror, the nasopharynx directly or with mirror, and in the nose, aside from anterior rhinoscopy, much information is gained by x-ray examination.

Early malignancy of the oral mucous membrane is evidenced by the appearance of a small, indurated painless plaque which infiltrates the membrane. Ulceration occurs early and may eventually spread to destroy a considerable portion of the lip, tongue or other structures. Metastasis is first, to the upper deep cervical and submaxillary lymph nodes. The enlargement of these nodes is often the first evidence of the disease, especially when the growth is located in the nasopharynx, pharynx or base of the tongue, areas not usually included in a casual examination.

Most cervical adenopathies in the adult are malignant and more than likely metastatic carcinoma from a primary lesion in the oral cavity or pharynx.

On occasions, infected tonsils have been suspected of being responsible for the glandular enlargement and their removal instituted forthwith. In some cases, according to Hayes Martin,[3] the tumor at the base of the tongue was so large that it was neces-

sary for the surgeon to push aside the cancer in order to get at the tonsil.

The combined use of surgery, radium and x-rays is the treatment and the prognosis is not too discouraging, even in the advanced cases.

In the larynx, symptoms depend upon the location of the lesion. If on the true cords, hoarseness, of course, is the early and most important symptom; if in an adjacent but still intrinsic area such as the ventricles and below the false cords, hoarseness is a later development and if extrinsic, this symptom may be entirely absent or very late in developing.

The early symptoms of the intrinsic type are a feeling of discomfort, tickling sensation or a "lump in the throat" and later, pain on swallowing or talking. Some form of hoarseness is present but this may seem insignificant to the patient. It should not, however, be disregarded by the physician who should make sure that the larynx is examined with a mirror, even though the procedure is found to be difficult and require extensive local anesthesia.

It should be thoroughly understood that an early diagnosis is vitally important, for as is the case with most malignancies, treatment begun early is simpler and more effective. The management includes surgical removal or irradiation or a combination of the two.

There is a growing tendency on the part of laryngologists to rely more on surgery and less on irradiation in the treatment of laryngeal carcinomas. In certain single cord lesions, laryngofissure suffices; in others, total laryngectomy, and this is contraindicated only in those cases with inferior metastases or in those which have invaded the pharyngeal wall.[4]

Carcinomas of the nose may become quite large before causing marked discomfort and previous to erosion of the bony wall, few symptoms are present which should direct attention to this area.

Symptoms which appear early are pains along the distribution of the fifth nerve, noted especially at night, or on lying down. Patients often experience pains in the teeth or paresthesia with or without infraorbital pain for some time before seeking medical advice, and even then, before obtaining a proper diagnosis.

Much time may be consumed with removal or care of the teeth or with nasal and sinus treatments for a theoretical sinusitis. On occasions, growths are removed from the nose which appear to be polyps but which are, in reality, malignant.

A sound practice is to have all apparent polyps sectioned and studied. These growths are more than likely merely a manifestation of allergy or infection, yet the history of many cases of malignancy includes the removal of recurrent polyps.

A case observed by the writer in 1941 had had growths removed from his nose at various times during the preceding three years. Profuse bleeding always followed and it developed that the so-called polyps were in reality portions of carcinoma arising in the ethmoid. Complete removal followed by roentgen therapy and a radium pack, resulted in a cure which has lasted now over five years. In many instances, the malignancy is only suspected in the presence of external manifestations such as swelling over the cheek or displacement of the eye or when the growth has eroded through the nasoantral wall to become a bleeding mass in the nasal cavity.

An early diagnosis is often stumbled upon by routine examination of the sinuses. In certain films, suspicious areas require further investigation and the diagnosis may be reached by aspiration biopsy or direct biopsy through a Caldwell-Luc exposure.

The modern method of treatment is a combination of surgery and irradiation. The antrum is entered beneath the cheek and the walls of the cavity, including portions of the floor are removed, leaving a permanent opening through which radium may be placed subsequently. The operation is followed by protracted roentgen therapy and the prognosis in general is good.[5]

INTRANASAL MEDICATION

We began years ago in the gay nineties with oily sprays of various colors and flavors. These were worthless but fortunately,

only slightly harmful. Then came the age of the nasal tampon, white or brown, depending upon your color preference.

The colloidal silver salts, neosilvol and argyrol are alkaline and irritating to nasal mucous membranes. They are harmful in the acute stages and of no value in the chronic. In subacute infections, their irritating action produces a flow of mucus which some think of value but the same could be produced by a few whiffs of snuff and much more could be gained in the treatment of these cases by using irrigation or the Proetz displacement method which draws out the accumulated secretions by suction.

We are now in the nose drop age. Nose drops came on with the introduction of ephedrine which temporarily shrinks down the nasal membranes. The more we use nose drops, the simpler we want them, the less we expect of them and the less we prescribe them. They afford relief for a few hours in cases of nasal blockage but have no curative value and their habitual use should be discouraged. They are also supposed to open up the drainage areas of sinuses but here again they are only a temporary expedient for home treatment until more effective therapy becomes available. If they must be prescribed, ephedrine 1 per cent in normal saline or some synthetic product such as neosynephrine serves the purpose.

The incorporation of sodium sulfathiazole in nose drops was unfortunate. Most of the preparations containing this drug are extremely irritating to the nasal mucosa; by and large they contribute very much to the promotion and continuation of nasal and sinus infections but at last happily are on the way out.

Solutions of tyrothricin and penicillin as nose drops are disappointing. Penicillin by inhalation is a new form of administration which is being widely used. The results so far in acute infections have failed to fulfill the expectations of its advocates.

MANAGEMENT OF CHRONIC SINUS DISEASE

At the outset I wish to state that sinus disease at the present time is not the hopeless condition it formerly was.

During the past 20 years considerable fine research and clear thinking have dispelled much of the confusion associated with the sinuses and thrown into the discard most of the antiquated multilating operations which did little more than disrupt nature's very fine mechanisms of defense.

We, at last, have come to realize the importance of the role played by the ciliated mucosa which lines the nasal and sinus cavities and the moving film of mucus covering it. We know that in the mucociliary mechanism we have a primary defense against infection, for pathogenic organisms picked up by the sticky mucus are destroyed. It is also known that in the event of a breakdown in this defense, an able secondary defense awaits the invaders in the subepithelial layers of the membranes.

Here through the capillary walls pour powerful inflammatory cells to attack the bacteria and carry them to the surface. In a sinus cavity, pus is thus formed and immediately waved toward the drainage outlet by the cilia.

In the early stages of sinusitis, the ostium is usually blocked by acute congestion and the pus remains in the cavity causing pain and toxic symptoms. As local immunity becomes established, the swelling subsides, the opening becomes patent and the exudate pours into the nose. In unhampered cases, the infection gradually diminishes and will heal spontaneously in a week or two, but often barriers are present which prevent free drainage and the infection lingers on. Should nothing be done to provide adequate drainage, a state of chronicity develops.

The proper treatment of a case of chronic sinusitis is naturally removal of the drainage defects which caused it. In many cases, simple infraction of the middle turbinate which has been blocking the opening, or the removal of polyps followed by a few irrigations will suffice. In others, more extensive procedures such as septal resection, control of an allergy or correction of other systemic disorders is required.

All patients require individual study and

planning and sometimes a therapeutic regime covering a considerable length of time. And through it all, prerequisites of success are complete cooperation of the patient and an unwavering enthusiasm on the part of the physician. In the truly obstinate cases, extra drainage openings known as windows are required but rarely indeed, is the radical removal of sinus mucosa indicated and this should be instituted only with the understanding that the procedure offers no assurance of complete and permanent termination of the disease.

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THE MANAGEMENT OF COMMON EYE INJURIES IN GENERAL PRACTICE*

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This presentation will not be of significant interest to the eye specialists. It is elementary and planned primarily as an aid for the physician who is doing general work and is sometimes called upon to treat an injured eye.

Eye injuries are the most frequent eye conditions that the general practitioner is called upon to handle. Not only are injuries very frequently met with but they are the conditions that when handled correctly at the outset many complications may be avoided. What I hope to do is to give you a brief outline of some of the eye injuries met with and call your attention to a few points in their diagnosis and treatment.

Eye injuries might be classified broadly as extraocular (lids and walls of orbit) and ocular (eyeball itself); ocular foreign bodies may be considered separately as extraocular and intraocular; wounds, divided into penetrating and non-penetrating types.

Let's consider the lacerated eyelid. This is treated the same as any skin laceration except when the laceration is complete, involving conjunctival as well as skin surface. In these cases the skin and conjunctival layers are sutured separately, using fine atraumatic suture material, absorbable for conjunctiva and silk for skin. If the lid margin is carefully aligned and the above precautions are observed very little scarring will result and the development of entropion or ectropion is not likely.

Ecchymosis and emphysema frequently make their appearance in contusion injuries around the eye. They must be considered as symptoms of fracture of the wall of the orbit until proved otherwise. Many times fractures of the orbital wall are undiagnosed and result in noticeable deformities of face when the swelling subsides. Many are missed unless they are actually looked for but careful inspection and palpation of the rim of the orbit will usually reveal a fracture if there is enough deformity to warrant reduction. If there is any doubt x-rays almost always reveal the presence or absence of fracture. Frequently ecchymosis and especially emphysema appear following a blow to the eye and no other signs of fracture are present. This is due to a small fracture of the lamina papyracea of ethmoid and laceration of nasal mucosa. This requires only conservative treatment as the displacement is negligible.

Let us now begin the ocular injuries by considering chemical burns of conjunctiva which are commonly met with as a result of industrial and household accidents. When the conjunctiva is severely burned adhesions between the eyelids and eyeball (symblepharon) may occur. The immediate treatment is copious irrigation of the conjunctival sac with water. The eyelids must be completely everted and any foreign matter removed. Following this, thorough washing in cases of alkali burns with 5 per cent acetic acid, and in acid burns 3 per cent sodium bicarbonate is washed through the eye until all trace of the chemical is

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removed. Lime is best removed from the tissues with a 5 per cent neutral ammonium tartrate solution. If pain is severe it may be alleviated with ½ per cent pontocaine solution as drops into conjunctival sac. Cocaine should not be used as it is harmful to the epithelium. The adhesions previously mentioned form daily and have to be broken up daily until the surfaces heal. This is done by forcing the adhesion apart with a glass rod after having anesthetized the eye.

Granuloma of the conjunctiva occurs most frequently when a foreign body has lodged beneath the conjunctiva, especially bits of wood or thorns. The granulomas manifest themselves as small pink masses polypoid in shape. If the granuloma and foreign body are removed the healing will be rapid and complete. I recall seeing a case recently of a trapper who said that several days previously he had stuck a piece of marsh grass in his eye and that he had gotten it out. He developed the granuloma several days afterward and this prompted him to see me. I removed the granuloma and just beneath the conjunctiva along the surface of the sclera a tip of grass was present. Healing was complete after its removal.

The cornea may be more or less involved in cases of conjunctival burns. In slight burns the cornea remains clear but stains with flourescein. Flourescein 2 per cent is a very valuable aid in detecting any break in continuity of corneal epithelium. One drop is instilled into the conjunctival sac, then after one minute it is washed out with normal saline and any erosion of the corneal epithelium will show up as a green stained area. Such burns usually heal within 24-36 hours and leave no scar. When the cornea is slightly opaque and stains deeply with flourescein some opacity is likely to result. In more severe cases the whole cornea may be destroyed. First aid treatment is the same as conjunctival burns but the deep corneal burns are likely to be followed by complications and will need treatment over a more or less extended period.

Ultraviolet burns of conjunctiva and cornea are seen most frequently in welders and are very painful with much burning, lacrimation and photophobia, the onset of which follows exposure to any ultraviolet light within four hours. The treatment consists of keeping the patient in a dark room with cold compresses over the eyes. The pain can be relieved with codeine and aspirin by mouth and instillation of drops of ½ per cent pontocaine or butyn solution into the conjunctival sac. Instill one drop of solution every three minutes until pain is relieved; this will have to be repeated when pain returns. Healing is usually complete within 24-48 hours and no permanent damage results.

Contusion injuries of the eye may range all the way from mere abrasions of the cornea to rupture of the eyeball itself.

Corneal abrasions are commonly seen following a glancing blow on the cornea. A frequent example is the case where the child hits the mother's eye with its fingers; another is the abrasions of cornea of infants when they roll over in the crib and an edge of the starched sheet scratches the cornea. Abrasions are a source of great concern as they are very painful and accompanied by much photophobia and lacrimation. When flourescein is instilled into the eye the lesion is readily seen as a green stained spot; even without aid of flourescein the depolished area of cornea can nearly always be seen. Healing is usually complete in 24-48 hours; but occasionally the newly formed epithelium will become eroded and the eye will again become painful until it heals over again. The treatment is directed toward relief of pain until healing takes place. The eye should be kept bandaged and pain relieved by instillation of pontocaine or butyn ½ per cent. Anesthetic drugs, especially cocaine, delay the healing of corneal epithelium and should be used as sparingly as possible.

Hemorrhage into the anterior chamber (hyphemia) follows more severe contusions. The blood can be seen settling into the lower portion of the anterior chamber. If the hemorrhage is small in amount it will usually be absorbed quite rapidly but

if it fills the entire anterior chamber glaucoma and other complications may set in. In the more mild case the patient needs only to be kept at bed rest and the eye bandaged until absorption is complete. Rest in bed cannot be over-emphasized in these cases as severe hemorrhages can take place 48-72 hours after a contusion injury which originally produced only a mild amount of hyphemia. The patient must rest until absorption is complete as physical exertion may cause more bleeding to take place. The coagulant drugs such as koogamin and synkamin may be used as an added safeguard against extra hemorrhage. A 1 per cent solution of pilocarpine may be used as drops (one drop three times daily) to guard against a rise in intraocular tension. Atropine should not be used.

Iridodialysis and traumatic mydriasis are conditions which occasionally follow rather severe blows to the eye. They are usually permanent and no treatment is indicated unless some other existing condition demands treatment. Iridodialysis is a rupture of the root of the iris resulting in a peripheral defect through which the red fundus reflex can be seen. Traumatic mydriasis is a permanently dilated pupil due to rupture of the sphincter muscles of the iris; sometimes the pupil is dilated due to paralysis of the nerves to iris sphincter and this type may recover to a certain extent.

Traumatic cataract, hemorrhage into vitreous, rupture of choroid, edema of retina and rupture of eyeball occur in severe contusion injuries. These usually affect vision to a more or less great extent and usually require protracted periods of treatment.

FOREIGN BODIES

Foreign bodies of the eye are very common and may be classified as extraocular and intraocular. Very frequently a small particle of foreign matter such as cinder will blow into the eye and this may become adherent to the conjunctiva (quite frequently under the upper lid) or cornea and may be removed with a cotton tipped applicator. A more difficult type to handle is the small steel or rust particles frequently found in welders and mechanics. These usually are buried rather deeply into the surface of the cornea. They are removed with a corneal spud after use of local anesthetic in form of butyn or pontocaine drops. A very important thing to keep in mind here is the so-called "rust-ring." This is the brownish deposit left on the cornea after the foreign body has been removed. This must be removed or the patient will continue to have trouble with the same symptoms as before removal of the foreign body.

Intraocular foreign bodies and perforating wounds of the eyeball may be considered together. As in all perforating wounds the possibility of an intraocular foreign body must be kept in mind even though it can frequently be ruled out on history alone. X-ray examination of the orbit should be done where foreign body is suspected. Since all perforating wounds require hospitalization and frequently surgery the first aid or immediate treatment consists of recognition of the ocular perforation, instilling atropine and protecting the eye with a bandage.

Most important is recognizing the presence of a perforation of the eyeball or the presence of an intraocular foreign body, which is not always as easy as one might think. For emphasis of this point I will cite a case which I recently observed. This patient was a mechanic who was working on a tractor and had his head under the hood while the motor was running. He felt something hit his eye but after a few minutes it no longer bothered him. The next afternoon he reported to the company doctor because his eye had begun to pain him and was slightly red. Upon examination the doctor found no foreign body and no perforation of the eyeball. Nothing significant was seen other than a slight injection around the limbus. The patient was dismissed with instructions to return the next day if the eyeball was still red; it was and the patient was sent in to me. Upon gross inspection of the eye the only significant findings were the injection around the limbus and a slight irregularity of pupil. There was no visible perforation, the

anterior chamber was full and there was no decrease in intraocular tension. The fundus was normal and there were no vitreous or lenticular opacities. Upon slit lamp examination, however, some cells were seen in the aqueous and a slight amount of exudate was seen on the root of iris at 6 o'clock. On the strength of these findings an x-ray examination of the orbit was made; the plate plainly revealed a small foreign body in the eyeball. I mentioned this case to show how few findings can be present in cases of perforations and intraocular foreign bodies.

Usually, however, a wound in the cornea or sclera can be seen. Other signs of penetrating wounds are: marked reduction in intraocular tension, prolapsed uveal tissue or vitreous and a shallow anterior chamber if the wound is through the cornea. The prognosis of all perforating ocular wounds must be guarded because even when best results are secured there is generally a considerable loss of vision. Of course, if infection should develop, even the very smallest wound may lead to loss of the eye. These cases are therefore definite surgical emergencies and the sooner the proper therapy is instituted the better the prognosis.

In general the treatment of perforating ocular injuries is: removal of foreign body if present, excise prolapsed tissue then suture the wound or cover the defect with a conjunctival flap, to prevent and treat infection.

I hope this outline will enable you to differentiate the serious from the less serious eye injuries and help you to handle with more confidence eye injuries in general.

DISCUSSION

Question—How did you handle the motor mechanic in whom you found the foreign body in the globe?

Answer—We of course hospitalized him and put him on penicillin; put atropine in the eye to keep the pupil dilated and reduce iritis. We also localized the foreign body which was found to be in the root of the iris. It did not puncture the lens and no cataract developed. We are checking from time to time to see if there is spread of iron granules throughout the eye. The man still has the foreign body. We first combated infection with penicillin and later on sulfadiazine and fever therapy. When the inflammatory process cleared we found no bad result from the foreign body and left it in. We are observing occasionally for complications which might warrant removal of the foreign body.

Question—Do repeated welder's arc burns ever cause any permanent damage such as inflammation of inside of eye or cataract?

Answer—Welder's burns or arc burns, ultra-violet light burns etc., when repeated quite often do not cause any permanent damage to the eye. Ultra-violet rays are absorbed by the cornea, iris and conjunctiva and do not reach lens or the vitreous or the retina.

Question—Discuss the use of yellow oxide of mercury merthiolate ointment, and penicillin ointment.

Answer—Yellow oxide of mercury ointment is used quite frequently in conjunctivitis, and in styes and you seem to get pretty good results in styes along with hot compresses; hot compresses do more good then yellow oxide of mercury.

Penicillin ointment works very well in conjunctivitis cases especially gonococcal and pneumococcal and also in infection. I had one bad experience with penicillin ointment and I believe this was in the first case I ever used it on. The man came in the office with an early sty on his eye and was leaving town that day. I thought I would be smart and used penicillin ointment. He got the ointment and went to Kansas City and when he got there he really had an eye. He went to a doctor up there and he said "what have you been using? He said penicillin ointment and the doctor said get off of that and you will be all right. The point to bring out is it seems there have been quite a few patients who used penicillin ointment and got an allergic reaction; it is still good though in eye infections.

As far as merthiolate is concerned, I have not used much of that myself except in several cases where there have been chemical burns of the conjunctiva. I use it in the eye every three hours and in cases in which I have used it it worked very well.

Question—How is the rust ring removed?

Answer—In most cases where you have a rust ring remaining after a foreign body has been in the cornea you can remove with eye spud. Other men use a small dental bur and you can fit the dental bur into the ring and bore or turn it a little and that will also remove the rust ring.

Question—How would you treat an eye that was infected by an intraocular foreign body that you had previously removed?

Answer—At the first sign of infection in the eyeball you want to pour on everything you can because infection in that eyeball is really dangerous as far as sight is concerned and of course if not already in hospital you will want to get the patient in quickly and dilate the pupil with atro-

pine. Start on penicillin 20 to 40 units every three hours; also give this penicillin with sulfadiazine — adequate sulfadiazine; 15 grains every three or four hours. It is also a good idea to give the patient some fever therapy in order to increase body resistance in general. A severe infection in the eyeball won't give you any fever at all and of course producing fever is a good way to combat infection in the eye. That is the way the body defends itself from infection; induce fever on that patient. A good way to do this is to give some typhoid vaccine, intravenously, about 25 million killed bacteria. Kick fever up every two or three days and also you can put hot local applications to the eye to increase local resistance. I think those are the high points in treating intraocular infection.

RH FACTOR AND ERYTHROBLASTOSIS FETALIS

A CASE REPORT

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In recent years there has rightfully been an increasing interest shown in the Rh factor in obstetrics and its related pediatric problem, erythroblastosis fetalis. Some of this interest has been abated, however, by the multiplicity of terms used in discussing the problem, and also by the fact that few laboratories were able to determine Rh factor accurately. There has also been considerable confusion among both general practitioners and specialists as to just what the Rh factor is, and in which individuals it was apt to cause complications.

The Rh factor is a newly discoverd factor of human blood first demonstrated by Landsteiner and Weiner[1] in 1940. It has been shown that this factor is found in 85 to 87 per cent white humans, 93 to 95 per cent negroes and in over 99 per cent Chinese and Japanese[2]. Those who have this factor are said to be Rh positive. Those who do not have this factor in their blood are Rh negative. It is only the combination of Rh positive father and Rh negative mother that is of clinical significance at present. It is only this combination that produces erythroblastosis fetalis in the offspring, but only about 5 per cent of these combinations result in sensitization reactions producing erythroblastosis. This sensitization by the Rh factor follows the familiar pattern of any bacterial immunization or sensitization. Those mothers who show an absence of Rh may be sensitized by pregnancy or by transfusion with Rh positive blood.

The presence of the Rh positive baby in utero causes the formation of anti-Rh antibodies in the blood of the Rh negative mother, or the transfusion of Rh positive blood into an Rh negative woman will cause the same result. The initial pregnancy or transfusion only serves to sensitize the mother and usually does not give any unusual results. It is the subsequent transfusion or pregnancy that gives us trouble. The end result of the sensitization is hemolysis, but in testing it is observed as an agglutination. Levine[2] has recently shown that some Rh negative mothers are incapable of producing complete antibodies that can be shown to agglutinate Rh positive blood, but do develop an incomplete antibody which specifically unites with and coats the surface of the Rh positive blood cells. This specifically coated Rh positive blood is incapable of reacting with potent anti-Rh agglutinogens. These are the so-called blocking antibodies of Weiner. The end result is the same, however, and erythroblastic babies may come from these mothers too.

Only in recent months has a testing serum of sufficient potency been generally available. Until this more potent serum was developed by Hill, et al.[4] there had been considerable discrepancy in the results obtained from checking suspected Rh factor sensitizations. In our laboratory using one type of testing serum we might find a patient to be Rh negative and demonstrate antibodies in one titer and sending the patient's blood to other serologists for checking, one might confirm our results and the other might get opposite results. Since using the new serum, our results have been uniform. However, to add to the confusion Kennedy[5] has shown that all cases of erythroblastosis are not found in families with the classical combination of Rh positive father and Rh negative mother. Some of

these are probably due to sensitization by sub groups of Rh or M or N factors.

I feel that every pregnant mother should be checked for Rh factor early in pregnancy. If she is found to be Rh negative the father and any children should be checked. If the father is found to be Rh positive I check the mother at regular intervals for antibodies. If, after the baby is viable, an increasing titer of antibodies is found I feel the baby should be delivered by section. Also, all females should be checked before transfusing and if Rh negative, should only be given Rh negative blood. This would avoid many embarrassing reactions from transfusions and might save the woman trouble with future pregnancies.

The following case is reported because of the unusual factors found and also in the hope that others may profit by the mistakes we made, even though we were successful in obtaining a normal baby and healthy mother.

CASE REPORT

Mrs. S. B., a white female, aged 23, was first seen on March 14, 1944, para 1, gravida 2. She gave a history of her first baby being stillborn on August 29, 1943 which was delivered in another hospital and was told the cause of stillbirth was faulty attachment of cord and that the cord was very short. Present pregnancy showed L.M.P. October 20, 1943 with E.D.C. July 27, 1944. She had an uneventful prenatal course until June 23, 1944 which was her last visit to the office. At this visit the blood pressure was 110/80, F.H.T. 160, baby L.O.A., urine negative. On July 5, 1944 she noted absence of fetal movements and within a few hours went into labor. On admission to hospital no fetal heart tones were heard on repeated examinations. On July 7, 1944 she was delivered of stillborn female infant under continuous caudal analgesia. This fetus showed definite evidence of erythroblastosis. No Rh studies were done prior to delivery as we were not running them in our laboratory at that time. In October 1944 examination revealed the mother to be Rh negative and father Rh positive, but no antibodies were demonstrated in mother's blood. Contrary to our advice she became pregnant again and came to the office on September 14, 1945 with history of L.M.P. May 18, 1945 and E.D.C. February 25, 1946. At this time one serologist was unable to demonstrate anti Rh agglutinin in her blood, but two others were able to; one in titer of 1:20 and the other in titer of 1:4. She again had an uneventful prenatal course and repeated checks failed to show any increase in the titer. It was decided to deliver her by section and this was done by Dr. Marvin T. Green on January 29, 1946 under continuous caudal analgesia. The baby was a girl with birth weight five pounds, two ounces. Color was good, no evidence of edema or cyanosis and cried lustily on delivery. She was given 15 c.c. of Rh negative O blood in cord vein immediately, placed in incubator and given continuous oxygen. Blood count was red blood cells 3,925,000, hemoglobin 65 per cent. On January 30, she was given another 15 c.c. Rh negative O blood I.V. On second day the baby developed rather severe jaundice which increased in severity until given another 12 c.c. transfusion of Rh negative O blood, following which the icterus completely cleared. Daily blood examinations showed a progressive anemia starting on the third day and lasting until the nineteenth day, when it began to climb. This anemia was in spite of giving the repeated transfusions. On the sixteenth day we started giving the baby blood intraperitoneally, giving 30 c.c. daily for four days. This was done because it became practically impossible to enter the baby's veins. Only after giving blood in this manner did the blood picture improve. The birth weight dropped to a low of four pounds, twelve ounces before starting to gain. The baby was placed on powdered milk formula supplemented with vitamin C, iron, and cod liver oil. It was also given vitamin K for the first week. The baby was discharged from the hospital February 20, 1946 with weight, six pounds, two and a half ounces, red blood cells 2,700,000 and hemoglobin, 50 per cent. It has continued to do well and when last seen on May 6, red blood cells, 4,100,000, hemoglobin, 65 per cent, weight 12 pounds, four ounces. The mother had an uneventful convalescense. Other than the jaundice and anemia the baby showed no other signs of erythroblastosis. The baby's blood is Rh positive A.

DISCUSSION

With knowledge gained from this case and recent literature[6,7] we feel that our biggest mistake was in not giving larger initial transfusions. If the baby had been given 60 to 75 or 100 c.c. of blood daily for the first three days it probably would not have had such a marked anemia. Of course it is questionable whether this larger volume would have embarrassed such a premature baby's vascular system. As was done in this case, we feel that the baby should not be allowed to nurse the breast as the antibodies are carried in mother's milk. Also, the short time interval between the pregnancies increased the chances of having trouble. As Davenport[8] has stated, at least

two years should elaspe between pregnancies in sensitized women.

Another point of interest is that apparently this baby's hemopoietic system was stimulated as much by the intraperitoneal administration of blood as by the intravenous method. In a premature baby this is of value due to the difficulty in entering the very small veins of such a baby. In this baby the veins seemed much thinner than those of the usual baby. Whether or not this is a characteristic of erythroblastotic babies I am unable to say. The question also arises of how long to administer Rh negative blood to an Rh positive baby. I feel that Rh negative blood should be given as long as the baby requires blood. Apparently the antibodies are still present and would only serve to hemolyze Rh positive blood if such were given.

I want to express my appreciation to Dr. J. W. Davenport, Jr., of New Orleans, La. and Dr. W. R. Mathews of Shreveport, La. for their help in checking the blood of this patient for us and for their counsel in the handling of the case.

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PENICILLIN IN ACUTE BACTERIAL ENDOCARDITIS

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As a result of the cure of a patient with acute bacterial endocarditis treated with massive doses of penicillin, our interest was stimulated in the value of penicillin therapy for this disease.

In reviewing the literature it was found that forty-one patients[1-14] with acute bacterial endocarditis have been reported as treated with penicillin. Sixteen of these were described as cured. According to the etiologic organism, the cured patients may be listed as follows: eight with staphylococcic endocarditis, [1-4] four with pneumococcic endocarditis, [5-7] and four with streptococcic (Hemolytic type) endocarditis, [1, 6, 8]. In those in which the dosage of penicillin was stated it ranged between 960,000 and 58,640,000 units. To evaluate the role of penicillin in the treatment of a hitherto uniformly fatal disease, one must know as much as possible about the clinical status of the patient and must have an equally detailed account of the management. With some exceptions this was not given in the available reports. It is hoped that more details will be presented in the future.

The overall mortality was 39 per cent. This is high, and without critical examination of these reports gives a false impression as to the value of penicillin in the therapy of this disease.

Keefer[13] reported nine patients with endocarditis due to *Staphylococcus aureus* treated with penicillin with a 100 per cent mortality. The dosage of penicillin varied between 270,000 and 2,340,000 units administered over periods of time varying from four to 52 days. He summarized the results by stating that many were treated late in the course of the disease and the dosage was inadequate. Glaser, Smith et al[4] report six patients with *Staphylococcus aureus* endocarditis, one of whom died with rupture of a brain abscess after five days' therapy. Dawson and Hobby, [10] in discussing penicillin therapy, reported three patients with pneumococcic endocarditis in whom penicillin therapy was begun with great improvement resulting initially. In two of these patients the blood stream was temporarily sterilized but because of sub-

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sequent unavailability of the drug, penicillin therapy had to be abandoned. All three succumbed. One of Herrell's patients[9] with *Staphylococcus aureus* endocarditis died on the first day of penicillin therapy. The causes of death in Dolphin and Cruickshanks' study[1] were as follows: one patient with *Hemolytic streptococcus* endocarditis died six months later of heart failure; another died 46 days after penicillin therapy of bronchopneumonia following a mid-thigh amputation, and a third with *Staphylococcus aureus* endocarditis of uremia on the twenty-first day of the disease although the blood culture had become sterile. One of Meads' patients[6] with *Hemolytic streptococcus* endocarditis died after two intramuscular injections of penicillin.

This analysis shows that other factors accounting for death were present in many of the patients which in no way could be attributed to a failure of the drug, and although the mortality does seem high on casual inspection, it is not a true picture of the value of penicillin in the treatment of acute bacterial endocarditis.

REPORT OF A CASE

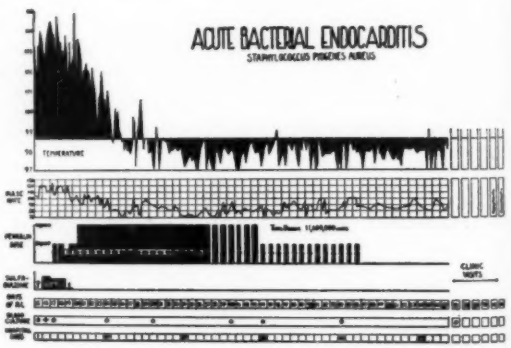
Present Illness: The patient, a 25 year old colored female, was admitted to the Charity Hospital at New Orleans the morning of September 2, 1945 with the chief complaint of severe pain in her neck. This pain started suddenly the night of August 31, 1945, approximately 36 hours before admission. At the time of admission she was almost moribund but was able to answer some questions. The pain radiated from the neck to the top of her head posteriorly.

The present illness dated back two weeks, during which time she had been treated by her local physician for chills and fever with accompanying left thoracic pain, and daily epistaxis. A course of sulfonamides was administered during the week previous to admission. Nausea and vomiting were associated with the onset of the neck pain. The left middle finger was swollen and painful. For three weeks preceding the acute episode, she had a furuncle on the left elbow.

Past History: Since early childhood there had been frequent episodes of tonsillitis. Tonsillectomy had been advised on several occasions but refused. In 1940 her first child was delivered by cesarean section. In 1941 she had a normal delivery. During the summer of 1944 she experienced severe joint pains and was admitted to Charity Hospital and a diagnosis of rheumatic fever with mitral stenosis was made. This attack was characterized by a painful, migrating arthritis accompanied by subcutaneous nodules over the involved points and distal portions of the limbs. There was cardiac enlargement and apical systolic and diastolic murmurs. After salicylate therapy and strict bed rest for four weeks she was discharged as much improved, but advised to remain in bed.

Physical Examination: At the time of the present admission the patient was found to have an enlarged, heaving, rapidly beating heart with a loud apical systolic murmur. A small hemorrhagic area was found on the left sclera and characteristic petechiae on the tips of several fingers and the soles of the feet. Her neck was moderately stiff. There were no other abnormal findings.

Laboratory Examinations: The hemogram showed: white blood cells 10,200 (87 per cent polymorphonuclear leukocytes), red blood cells 2,800,000, hemoglobin 70 per cent, sedimentation rate (uncorrected) 41 mm. Spinal fluid examination, September 2, 1945, revealed a pressure of 194 mm. of water, many crenated red blood cells, 672 mgm/100 c. c. of chlorides, 54 mgm/100 c. c. of glucose and 290 mgm/100 c. c. of protein. The supernatant fluid was xanthochromic. The spinal fluid culture was negative. On September 3, 1945 the spinal fluid revealed a pressure of 230 mm. of water and numerous red blood cells and on September 9, 1945 it was clear with a pressure of 366 mm. of water. Blood culture made the day after admission showed numerous colonies of *Staphylococcus pyogenes aureus.*



The hospital course is illustrated by the chart. It can be seen that a total of 11,300,000 units of penicillin were administered intramuscularly. There was little or no clinical response until the penicillin was increased to 480,000 units per day (40,000 units intramuscularly every two hours, day and night). The blood culture became negative after 120,000 units. She remained under observation in the hospital for 53 days and six months in the out-patient-clinic. Other than for the physical findings of mitral stenosis, which she had before her present illness, she continues to be well to date.

COMMENT

This case fulfills the clinical criteria for a diagnosis of acute bacterial endocarditis with cure following the administration of penicillin. From this experience and that of others, it appears that when penicillin is administered early and adequately the mortality of this disease can be materially reduced. The organism should be isolated, its sensitivity to penicillin determined *in vitro* and adequate dosage administered early. It is our opinion that adequate dosage is at least 0.5 million units per day. There have been only four patients reported in the literature who have received penicillin dosage comparable to this amount[3, 4]. These patients and the one now being reported had uneventful recoveries.

Early and large dosages of the drug is in line with the present day concept of penicillin therapy in subacute bacterial endocarditis. Although there have been cures in acute bacterial endocarditis using smaller doses than 0.5 million units daily, the presence of highly sensitive strains of organisms may have accounted for the good results. In general, small inadequate doses are to be condemned as they may result in penicillin-fast strains. It is quite likely that even larger dosages will prove to be better. The use of measures to increase and maintain high penicillin levels in the blood may prove to be of further value.

SUMMARY

A patient with acute bacterial (staphylococcic) endocarditis is described in whom fairly large doses of penicillin effected a dramatic clinical cure. The value of penicillin therapy and dosage are also discussed.

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PAROXYSMAL AURICULAR FIBRILLATION

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Formerly spoken of a "perpetual arrhythmia", auricular fibrillation is now known to occur in transient form as paroxysms of irregular tachycardia. The paroxysmal form of the disease is also more common than once was thought, as its appearance in a multitude of systemic and cardiac diseases as well as in normal individuals has become recognized with increasing frequency. Taxonomologically, the disorder may be placed with those cardiac conditions characterized by a disturbance in the cardiac mechanism, but differs from all of them in that, in itself, is is not evidence of cardiac disease.

In order fully to understand the findings, clinical and electrocardiographic, to realize the various roles which the etiologic conditions play in its occurrence and, above all, rationally to treat it, the underlying cardiac mechanism and the physio-pathology by which paroxysmal auricular fibrillation is induced must be understood. Like auricular flutter, auricular fibrillation, both permanent and paroxysmal, is produced by a disordered initiation and transmission of the impulse which results in exceptionally bizarre and rapid auricular action. The belief held by most cardiologists at present is that it can be explained most readily by the concept of circus movement, first demonstrated

by Mayer and 1908, rather than on the basis of ectopic foci of impulse initiation, the hypothesis long held in Europe.

The experiment first performed by Mayer to demonstrate the existence of circus movement was to show that an electrical impulse applied to one point on the periphery of the umbrella of a jelly-fish (Medusa) would cause a depolarization wave to pass over the umbrella which would contract in its wake, then lie quiescent as the tissue underwent repolarization. If, however, he produced a local block in one small area of the periphery and applied the stimulus again, the contraction wave failed to pass the blocked area (which was then refractory) but would continue about the periphery of the umbrella in the direction opposite from the block, and, finding excitable muscle continuously in its path as it made the circuit of the umbrella edge, would proceed until it reached the previously blocked area. If this block had now become once more excitable, the depolarization wave, upon reaching it, would stimulate it to contract and pass on beyond it into the area from which it started. The refractory phase of the muscle was, however, such that during the circuit of the umbrella, by the depolarization wave the point of stimulation had once more become excitable, as had the blocked area, with the result that the wave, continuing to find excitable muscle in its path once more started the circuit without further stimulation being applied and was able to repeat its path indefinitely. Garrey[4] and Mines[1] linked up Mayer's observations upon the jelly-fish with the fibrillation of cardiac muscle. Mines showed that similar circular motion of the contraction wave could be induced in the cold-blooded heart, and Garrey that these waves could be produced in auricular muscle long as there was sufficient amount of tissue present to allow the refractory period to be overcome before the head of the circulation wave once more reached its starting point.

Lewis[7] studied this movement in mammaliam muscle tissue and concluded that, as in Mayer's Medusa, local blocks also existed during the condition in heart tissue. These blocks were described as being produced by the partial refractory state of isolated muscle islands.

From these investigations and others, it was concluded that four conditions were involved in the establishment of the circus movement: (1) local blocks in the auricular muscle; (2) a shortened refractory period; (3) a slow rate of conduction of the wave and (4) an annular course of sufficiently large diameter to permit a complete circuit to become propagated.

That clinical flutter and fibrillation are brought about by the induction of a circus movement within the auricle is subject to little doubt. The impulse is believed to travel in the natural rings of muscle encircling the openings of the great veins; this has been demonstrated electrocardiographically by Lewis[7]. This circular wave is the governing factor in flutter rhythm, from it centrifugal waves are thrown off into the tissue adjacent to the circular pathway from which they proceed through the auricular musculature and die away in the outlying regions: the right and left appendiges and the sleeves of the great veins.

Flutter and fibrillation are now considered to be of essentially the same nature and impure flutter the transition between pure flutter and fibrillation. In pure flutter the circular wave is repeated over and over again with precise accuracy, and the centrifugal waves pursue their prescribed courses uniformly from cycle to cycle, setting up rhythmic contractions of the auricles at a rate between 200 and 350 per second. In impure flutter the irregularity is accounted for by the greatest degree of deflection of the centrifugal waves brought about supposedly through an increase in the partial refractory state, that is, more unexcitable fibers in the path of the waves in their passage through the eccentric regions of the musculature with change in their pathways from cycle to cycle. In fibrillation, though the general revolving movement of the central wave is still maintained, it does not follow the same course from cycle to cycle and the centrifugal waves are also deflected from one path to another,

both for the same reason: the presence of more islands of refractory muscle in the pathways of these impulses. Aside from this deviation in the pathway of the main waves by these islands, they also disturb the regularity of contraction in another manner. These islands of muscle tissue though refractory when the impulse first strikes them may become excitable while the impulse is passing around them and thus become excited in a retrograde manner, and, possibly, setting up other circus movements of a shorter duration and more temporary pathway. The net result is that there is at all times within the auricle depolarized, repolarizing and excitable muscle so that the organ is never still but is with some few fibers in a contracted state at various places throughout at a given instant. This produces an organ whose walls are quivering at a rate of from 400 to 550 contractions per minute and are distended by the contained blood which the asychronous and multitudinous contractions are unable to expel.

This mechanism prevails in both permanent and paroxysmal auricular fibrillation. Though permanent auricular fibrillation is usually associated with organic disease of the heart, paroxysmal fibrillation is not, surprisingly, necessarily so. In a series of 200 cases of paroxysmal auricular fibrillation, Parkinson and Campbell[10] found the occurrence of the disorder to occur in patients with detectable organic heart disease in 85 per cent, while in 15 per cent no evidence of heart disorder other than the paroxysms could be detected clinically or electrically, nor was there any systemic disease which might affect the heart nor any history of an etiologic factor known to produce heart disease.

It is evident that auricular fibrillation, permanent and paroxysmal, with heart disease or without it, can be produced by any condition which is capable of causing local blocks to appear in the auricular muscle and depressing the conduction time of its fibers. As a general rule, only conditions which actually produce a permanently diseased state of myocardial muscle will cause the condition to become permanent. On the other hand, however, almost any condition which is capable of producing temporary changes in the physiologic state of auricular muscle, whether these changes result in permanent damage or not, is capable of producing paroxysms of auricular fibrillation. Thus the disorder may be encountered in acute rheumatic fever, in thyrotoxicosis, in mitral stenosis before it takes on its permanent form, in hypertensive heart disease, in pneumonia, "chronic myocarditis," in coronary occlusion and angina pectoris, as well as in a host of apparently unrelated disorders such as chronic gallbladder disease, angioneurotic edema, after or during general anesthesia[8] and in persons with no heart disease whatsoever.

The mechanism by which the necessary changes appear in the auricular muscle in people with organic heart disease or in those diseases which are capable of producing slight physiologic aberration through toxic effects (as in pneumonia and any severe infection) or by virtue of increasing the strain on the heart (fevers of almost any sort, for example) is at once obvious, that by which the changes occur in those with none of these disorders is not. It is easy to hypothesize momentary changes in coronary circulation with transient ischemia of isolated sections of muscle, a cardiac diathesis which predisposes certain individuals to fibrillation as a result of physiologic stimuli, undetected disease, sensitivity reactions to foreign protein, disturbances af acid-base balance which escape detection and the uncalculated action of ingested substance and many others; these however, receive no experimental substantiation and no real clinical justification. The occurrence of the disorder in such a panoply of conditions which could not be construed as disease states and in conditions in which altered physiology of the body as a whole could not or was not demonstrated, and in the face of demonstrable basis, the comparatively few patients with such disorders as pneumonia, who develop the condition does seem, superficially, to lend some weight to the possibility of a pre-

disposition to the condition, a fibrillation diathesis, as it were, in which the auricular muscle is more sensitive than normal to physiologic stimuli of various sorts.

Clouding immeasurably further conjecture on the occurrence of paroxysmal auricular fibrillation in either normal or diseased states is the paucity of information concerning the actual stimulus to the onset of the attacks. With permanent fibrillation it is consistent with the diseases (or drug states) in which it occurs that it should be present and persistent, but the aberration in cardio-muscular physiology which is instrumental in initiating its rapid onset and equally rapid cessation, the final stimulus to the production of local blocks and selective, isolated prolonged conduction time is not known.

Of those patients with diseased hearts in which paroxysmal auricular fibrillation occurs a definite incidence is seen. In the previously mentioned series of Parkinson and Campbell[10], 15 per cent of their 200 patients had thyrotoxicosis, the remaining 70 per cent (after excluson of the idiopathic group) was divided more or less equally between rheumatic fever, hypertension, and primary myocaridal disease. Of this last group coronary occlusion is the most common. On studying the statistics from the other point of view, it was seen that a large percentage of the patients with mitral stenosis, with thyrotoxicosis and with coronary occlusion have attacks of paroxysmal fibrillation which in many cases becomes permanent. So often do these diseases demonstrate the disorder at some period during their courses that paroxysmal auricular fibrillation is expected and its development guarded against.

The signs and symptoms of paroxysmal auricular fibrillation are as varied as its etiology. In any instance of its occurrence, however, there are certain definite manifestations which may be elicited. With the onset of an attack, the ventricular rate becomes, in the space of one beat, accelerated so that the apex beat lies between 130 and 170 per minute and is grossly irregular. The peripheral pulse very frequently, especially with the more rapid rates, reveals a definite deficit of ten beats or more below that at the apex. The explanation for this is at once simple and obvious. With the onset of fibrillation the auricular rate rises to between 400 and 550 per minute, and this, as has been seen, with great irregularity. The impulses reaching the auriculoventricular node are therefore very rapid and irregular. Because of their rapidity the A-V node and the ventricles are able to respond only to one impulse out of every three or four, thus accounting for the ventricular rate[2], and since these beats are grossly irregular the ventricular response likewise is irregular. There is conceivably another factor in the production of this rate and irregularity. The impulses which reach the node follow along the strands of auricular muscle which converge "like the rays of a fan" upon its auricular end. In a state of fibrillation, with the existence of local blocks and slowed conduction time of some of the muscle fibers, all the impulses do not reach the A-V node simultaneously. The normal discharge of the node is dependent upon the summation of all these individual currents from the s e p a r a t e strands. Thus, the arrival of impulses at the node will, speaking in terms of the summation of all existing individual impulses, vary in intensity. During the absolute refractory period of the node following its discharge, no magnitude of impulse will stimulate it, but once the excitable state is reached the summation of impulses of a voltage greater than its threshhold value at the auricular end may or may not be sufficient once more to excite its tissue. When the necessary summation occurs the impulse is transmitted and the ventricle contracts. The occurrence of an impulse of sufficient magnitude is entirely irregular, and so, thus, is the ventricular rate.

The occurrence of the pulse deficit arises from the transmission by the node of auricular impulse while the ventricles are in a partially refractory state following the previous contraction. This results in a diminished force of contraction which may not be sufficient to raise the aortic valve.

The heart sounds and associated murmurs, if present, are found to vary in intensity from cycle to cycle and, in those contractions which correspond to the pulse deficit, the second heart sound may be lacking. In associated mitral stenosis there is a disappearance of the characteristic presystolic murmur produced by the rhythmic contraction of the auricles.

The symptomatology of the disorder is variable in the extreme, depending to a great extent upon the duration of the paroxysm and the state of the circulation before the attack. In the normal individual, or in he in whom the cardiac reserve is normal, the symptoms are usually minimal, consisting principally of palpitation brought about by the rapidity and gross irregularity of the ventricular rate. In patients whose cardiac reserve has become depleted by the presence of preexisting myocardial disease, the symptoms may become much more severe: dyspnea, which occasionally accompanies the paroxysms in the normal individual, may become pronounced in a short time, in some cases proceeding to acute pulmonary edema with cough and the expectoration of blood-tinged sputum: congestive failure with all its signs and symptoms may become apparent within a few hours in the patient with myocardial disease. An attack of long duration will intensify all the symptoms of failure in these patients as the cardiac reserve becomes progressively diminished. In shorter attacks, even in diseased hearts, there may be no evidence that failure threatened, provided the circulatory condition is such that the disturbance can be countenanced. Conversely, the blood pressure may fall and evidence of shock develop in the person with no other evidence of depletion of myocardial reserve as well as in the cases with frank failure.

In some instances[9] there occur attacks of syncope with the onset of paroxysms of auricular fibrillation; these however, are believed to be rare. In other cases, more common, the onset of the disorder produces varying degrees of typically anginal pain; indeed, Wolff[13] lists two cases in which he feels that a true angina pectoris, in fact a status anginosus, was induced by paroxysmal auricular fibrillation. This is particularly true, according to Foti,[6] if the attack occurs, as it so often does, during the first few days of a coronary occlusion. In some instances it may be the initial pain which the patient has experienced when the occlusion is atypical and in those with few initial manifestations. In this respect paroxysmal attacks of fibrillation may be in some instances indistinguishable from true coronary occlusion on the basis of both pain and the presence of shock, necessitating a most careful examination of the patient and his history in order to institute satisfactory treatment, and to establish the justifiable prognosis.

In rare instances in paroxysmal fibrillation (but much more commonly in the permanent form) and usually only after the paroxysm has existed for several days, does the formation of a clot in the quivering but dynamicaly static auricle occur and with the evidence in many instances of embolic phenomena producing pulmonary infarction with all its signs (if the clot is in the right auricle) or hemiplegias, and other signs of arterial infarction when in the left. When the entire picture of paroxysmal auricular fibrillation is examined, however, embolic phenomena appear to occupy but a very infrequent position, albeit a disastrous one.

In pneumonia, according to Levine,[8] the onset of fibrillation is an extremely serious occurrence, producing complete circulatory collapse.

The bedside diagnosis of paroxysmal fibrillation may, as one may see, be relatively simple or exceedingly difficult. In the instances uncomplicated by anginal pain or cardiac failure, in short in the "normal person" who develops an attack, the diagnosis by physical signs is usually tenable. In those with congestive failure uncomplicated by anginal pain, it is only slightly less so. In the event that substernal pain and shock occur, together or separately, the differential diagnosis between paroxysmal fibrillation and coronary occlusion must be established.

The physical findings of a grossly irreg-

ular ventricular beat at the apex whose irregularity is accentuated by exercise, the ventricular rate of 130 to 170 associated with a pulse deficit, the change in the character of the heart sounds and murmurs are all extremely reliable, and if there is also present heart disease, either on an etiologic basis, in the history or detectable by other findings (thyrotoxicosis, mitral stenosis, for example) in which paroxysmal auricular fibrillation is known to occur with some frequency, they may be further strengthened.

In those infrequent instances in which the problems of distinguishing between fibrillation and coronary occlusion arises the most reliable procedure in bedside diagnosis is, according to Foti[6] and to Stubenbord,[12], the history. The subject of paroxysmal auricular fibrillation may have had similar attacks, terminating without sequelae. In acute coronary occlusion a past history of previous attacks would necessarily have been prolonged. However, this is obviously not always reliable for the patient with previous paroxysmal attacks may have coronary occlusion and vice versa. Of greater import than the past history is the different sequence of events in the two conditions: in fibrillation the first symptom is palpitation, in occlusion it is pain. The presence of temperature over 100° and a leukocyte count over 15,000 occurs only in occlusion[6] and on these the diagnosis may be settled. It must be kept in mind however, that fever does not always occur in coronary occlusion.

Electrocardiographic tracings are in all instances immediately diagnostic of paroxysmal auricular fibrillation and serve to distinguish it from any other condition with which it might become confused clinically. The complete absence of the P wave in all leads, the irregular fibrillary deflections present continuously throughout the tracing, and the totally irregular ventricular response with a rate of between 130 and 170 per minute are characteristic of the condition.

The treatment of paroxysmal auricular fibrillation involves two different aspects. One, the treatment of the uderlying condition which is responsible for its occurrence, and secondly the treatment of the fibrillatory attack.

Treatment directed toward the underlying condition is difficult in patients in whom attacks of paroxysmal fibrillation are multiple. Such transient causes as emotional strain, acute febrile illness, for example pneumonia, are difficult only in the sense that they themselves present special problems of treatment. They are not chronically persistent and do not involve irreversible anatomic change which will persist in precipitating the paroxysms. Acute coronary occlusion, likewise, produces fibrillation only during the first few days of its presence and its treatment is, of course, desirable from many aspects other than eliminating the fibrillation. The elimination of thyrotoxicosis by thyroidectomy is not always successful in preventing recurrent attacks of fibrillation (although in many instances it does do so) which, like the exophthalmos, often persists indefinitely. Those conditions associated with anatomic changes in the heart itself, such as mitral stenosis and the permanent mycarditides, are of course, not available for treatment as far as their elimination is concerned. Those people in whom paroxysmal attacks occur without discoverable cause may receive treatment directed toward whatever seems most likely to be responsible; emotional rest, the avoidance of precipitating behavior if such can be determined, may be tried but are likely to meet with little success.

Therapy directed toward the specific disorder, the attack itself, involves both the management of the existing attack and the prevention, by pharmacologic and environmental means, the occurrence of future paroxysms.

The management of the attack of fibrillation encompasses several considerations: the length of the attack, the frequency of separate paroyxsms, the cardiac and circulatory state of the patient and the comfort and psychic reaction of the person to his disorder. In the individual in whom short, infrequent (2 or 3 per year) parox-

ysms occur without causing much discomfort, it seems generally to be felt that drug therapy need not be employed, the individual being encouraged to bear with them. This has a distinct rational basis. The drugs used in combating fibrillation, both in prevention and in management, are all toxic, and digitalis, if given may serve to entrench the fibrillation. The only management needed, or rather advised in these cases is sedation, preferably by barbiturates, and continued only during the attack and only if the patient becomes anxious and uncomfortable.

When, on the other hand, the attacks occur at frequent intervals, are accompanied by evidences of myocardial failure (dyspnea, increased venous pressure, retarded circulation time) or persist for long intervals—when the fear of permanence is entertained—direct therapy is indicated. Two drugs are employed toward this end, digitalis and quinidine, but with different purposes.

Digitalis acts on the fibrillating heart in four ways: (1) by its stimulation of the vagus it shortens the refractory period and prolongs the conduction time of auricular muscle. These factors together tend to augment fibrillation by increasing the excitable gap in the circus impulse. (2) It acts directly on the auricular muscle lengthening the refractory period and decreasing conduction time; these are essential to the interruption of fibrillation. (3) It acts on the junctional tissue of the A-V node to slow transmission of the impulse to the ventricles, thus producing a ventricular slowing. The first two effects do not reach equilibrium, but usually the first overbalances the second so that the fibrillation tends to be enforced. However, by slowing the ventricular rate through decreasing nodal conduction, the ventricular contraction is made more regular and by (4) increasing the contractility and efficiency of ventricular muscle, they are made stronger. It is for the ventricular effect that digitalis is given. The control of the ventricular rate is desired in any case in which myocardial failure develops or is expected on the basis of preexisting cardiac damage, in which event the actual cessation of the fibrillary movement is of less importance. Besides digitalization of the patient, the rites of rest, and sedation are performed here as in any case of failure.

The use of quinidine (usually as quinidine sulfate), on the other hand, is indicated in those patients in whom the paroxysms occur at frequent intervals, are particularly severe, or continue for long periods of time. Quinidine when used in fibrillation abolishes vagal tone and so lengthens the refractory period of auricular muscle and prolongs the conduction time, it acts directly on the auricular and ventricular muscle to lengthen the refractory period and to slow the transmission rate. It depresses conduction in the junctional tissues. Thus quinidine tends to abolish fibrillation, which it does effectively, and to protect the ventricle from the high and irregular rate of impulse, which it does not always do because of the ability of the node to respond to more of the auricular impulses because of the slowed auricular rate. Although occurring at a slower rate, these impulses are still quite rapid in some instances and may serve to heighten the frequency of ventricular contraction. For this reason the use of quinidine is not favored except in those persons who manifest no circulatory failure. Quinidine is highly toxic, and sensitivity to cinchona alkaloids is a definite contraindication to its use. Marked cardiac damage (as coronary occlusion), a history of embolic phenomena, long standing valvular disease, all speak against its use, and in complete heart block it should not be given for little is gained by attempting to interrupt the attack.

Quinine has been used in the place of quinidine by Horne[5] and earlier by Wenkebach[5] with apparently good results. Its action is that of quinidine, and, according to Horne, its toxic manifestations are much less severe and less likely to occur.

In those patients who require treatment during the attack of paroxysmal auricular fibrillation it is usually desirable to prevent the occurrence of future episodes. This may

be done effectively by quinidine sulfate given in doses of 0.3 gram thrice daily. It should be continued for a sufficient time to ascertain whether attacks are being inhibited, if not the drug should be withdrawn. Occassionally, in those instances whe the occurence of an attack is pretictable, the drug may be given before the single paroxysm in order to abort its occurrence.

In fibrillation occurring as a result of coronary occlusion, treatment of the paroxysm is suspended, and directed instead toward the underlying condition.

Paroxysmal auricular fibrillation, as has been stated, is not in itself evidence of myocardial disease, although it frequently occurs as a complication of it, or develops spontaneously more rapidly in patients with some evidence of heart damage. The function of the heart as a pump is invariably impared during attacks of paroxysmal auricular fibrillation, but most often the cardiac reserve is adequate to maintain circulatory equilibrium. Except for those cases in which acute ventricular failure is likely to be precipitated, the great dangers of the disorder are the occurrence of emboli from an intra-auricular thrombus, and the possibility of the fibrillation becoming permanently established as the cardiac mechanism. In these respects the prognosis is satisfactory in those patients with occassional or short episodes, but the increasing frequency of the attacks, and the lengthening of the paroxysms make this danger much more imminent.

SUMMARY

Paroxysmal fibrillation of the auricles is, of all the disorders characterized by paroxysmally rapid heart action, the most benign, and by far the most common. Its intelligent management can do much for the comfort and well being of the patient while offering him, as far as the uncomplicated disorder is concerned, adequate assurance of cardiac health.

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LOUISIANA PHYSICIANS SERVICE, INCORPORATED

In the organization section of the Journal will be found a discussion of the Louisiana Physicians Service, Inc., which is the prepaid medical care plan under the auspices of the State Medical Society. The executive director, Mr. Frank Lais, Jr., has propounded questions which he has answered which will explain in good part the mechanisms whereby the physicians of Louisiana may take advantage of this very forward step in the care of those who participate in the insurance plan. We would urge most wholeheartedly that the doctors of the state back up the Louisiana Physicians Service, Inc. They should be prepared to explain this insurance plan to their participating patients in the lower income group because it is this group which notably has difficulty in meeting their financial obligations when they have a severe or catastrophic illness. They should explain to such patients that the charges are small and that a sum of slightly over ten dollars a year for the individual and slightly over twenty-five dollars for a family will assure medical care for a year.

This plan, worked out by Dr. O. B. Owens and his committee, is one that should have the enthusiastic support of every member of the State Medical Society. It is to be hoped that the members of the organization will do their best to make the plan work notably in order to combat the anticipated by some, socialization of medicine.

THE HILL-BURTON BILL

This bill has to do with hospital construction and survey and it is an important step in making provisions for hospital service for residents of every state.

The bill, however, does not seem to be of tremendous importance to the doctors of Louisiana. Louisiana pays 48.7 per cent of hospital income from taxes. This is very much higher than any other state in the United States. California ranks next with 37.8 per cent, New Jersey 36.5 whereas in Alabama and New Mexico less than two per cent of the hospital income comes from taxes.

Even more astounding than these figures is the fact that for the support of general

hospitals Louisiana pays almost twice as much as any other state. In 1942 for general hospitals Louisiana expended $4,885,000. There was only one other state which paid as much as 50 per cent of the costs of general hospitals; this was Michigan which expended $2,512,000. No other state paid as much as $1,700,000.

Other figures, obtained from a recent publication, "Medical Services by Government," written by B. J. Stern, however, do not put our state in quite such a favorable light. When it comes to the support of mental hospitals, tuberculosis hospitals and institutions for the handicapped, state spending is low. Our expenditure for tuberculosis hospitals is definitely low and for mental hospitals places the state well down the list of all the states. It is obvious from these figures that we have a super-abundance of state supported general hospitals as contrasted with other states. On the other hand we need additional beds for mental hospitals and for tuberculosis institutions as well.

The expenditure for institutions for the handicapped, that is for the blind, the deaf, the mute and the feeble-minded, is about the mean for the states throughout the country.

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THE LEUKOCYTIC COUNT IN INFECTIOUS HEPATITIS

Havens and Marck* have had the unique opportunity of observing a series of patients who had experimentally induced infectious hepatitis. These subjects were healthy male human volunteers whose age varied between 19 to 29 years. In addition to their observation on the course of the disease, the symptoms that the patients presented, and the other findings more or less characteristic in infectious hepatitis including jaundice, they made serial observations on the leukocytic response during the incubation period of the disease and its course. It is the response of the white cells to the virus that we wish to comment upon because the leukocytic count is of value in the diagnosis of this interesting disease which has become so frequent during the war period when large groups of young people were collected together.

Twenty-six patients are reported upon in detail. It is to be noted that the leukocytic response begins in the first twenty-four to forty-eight hours of fever and it is associated with the febrile pre-icteric phase of the disease. There develops early a leukopenia, a leukopenia which involves both the neutrophils and the lymphocytes. The charts of these observers show that there is a sharp drop in the total count which may fall as low as 2,000.

The average count is approximately 4,000. With the development of jaundice the count rises gradually to a level between 6,000 and 7,000. The return to normal leukocytic relationship occurs by the end of the second week after the fever has appeared. There are exceptions of course and counts as high as 11,000 may be observed but, as noted before, the average count at time of the fever when the diagnosis is in abeyance because jaundice has not yet appeared, is low.

It should be noted further that there often appears a relative lymphocytosis with numerous atypical lymphocytes. The monocytes are sharply depressed while there is fever. The abnormal lymphocytes producing a relative lymphocytosis are often of the large type so that large lymphocytes may form in as many as 40 to 70 per cent of the total number. A few of these large cells are atypical in appearance so that their discovery may be of diagnostic importance.

Infectious hepatitis, now known definitely to be a virus disease, is sometimes difficult to recognize before the appearance of jaundice. A series of careful blood counts may be of some help in determining the febrile disease which a patient may have and of which the cause is unknown, prior to jaundice.

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*Havens, Maj. Walter P., Jr. and Marck, Ruth E.: The leukocytic response of patients with experimentally induced infectious hepatitis, Am. J. Med. Sci., 212:129, 1946.

ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

PREPAID MEDICAL CARE PLAN TO ISSUE POLICY CONTRACTS THIS MONTH

The issuance of contracts by the Louisiana Physicians Service, Inc., the prepaid medical care plan sponsored by the Louisiana State Medical Society, will begin this month, according to Dr. O. B. Owens, president of the new company.

The insurance company was organized as a mutual non-profit association which will provide indemnity coverage to the subscriber for surgical and obstetrical services rendered by a licensed physician.

All doctors in the State of Louisiana are requested to become participating physicians in the plan and are asked to register with the company. There is no fee or cost for registration. During the month letters, pamphlets, physicians service reports as well as the participating physicians agreement will be mailed to each doctor explaining the plan in detail. All doctors are asked to support their prepaid medical care plan as it costs nothing except recognition of the efforts in organizing the plan which it is hoped may be substituted as an alternative to "socialized medicine." Prepaid medical care plans are in operation in nearly every state at this time and have the approval of the American Medical Association. We now ask your cooperation in Louisiana to make this plan the symbol of cooperation between doctors.

The subscriber to the plan will be issued a membership card and the doctor may identify the patient through this card. The doctor should have his secretary contact the branch office indicated on the card to determine if the patient is entitled to the benefits in his contract. The home office in New Orleans or branch office in the hospital service group in the cities of Alexandria, Baton Rouge, Shreveport and Monroe will verify the patient's eligibility for service.

The only other thing the doctor has to do to assure himself that he will receive payment for his service is to have the subscriber sign his name to the assignment contained in the physicians service report, complete the report upon the termination of service and mail the reports monthly to the branch office hospital group in his immediate territory. This system requires less time than billing the patient individually and definitely assures the physician of his fees in accordance with the schedule of benefits if the subscriber is entitled to service.

Participation is voluntary. The participating physician remains free to act in relation to patients in accordance with the custom of ordinary practice. The subscriber to the Society's prepaid medical care plan may select any licensed physician to perform any surgical procedure and the other benefits covered by the contract.

The physician will make his usual charge to patients and the patient will pay that portion of the fee, if any, that remains after payment has been made by the Louisiana Physicians Service, Inc.

For additional information relative to the Society's plan address your communication to the Executive Director, Room 103, 1430 Tulane Avenue, New Orleans 13.

Following is a group of questions and answers which highlight the plan.

What is it?

A non-profit plan for providing surgical and obstetrical care.

Why does it exist?

In order that this care may be made available to all who need it but have previously found it difficult to pay for.

How is payment made easier?

By making small monthly payments into a fund which will provide for the care

when it is needed without any additional burden on the subscriber.

Who is sponsoring it?

The Medical Doctors of Louisiana, through the Louisiana State Medical Society.

How will it be sold?

Through the group enrollment plan in use by the non-profit Hospitalization Organizations of the state.

How expensive will it be?

The premiums will be approximately the same as the premiums for group hospitalization; 85 cents per month for subscriber, and $2.10 per month for entire family.

For whom is it intended?

Those employed individuals whose incomes are not sufficient to provide such care for their families without some difficulty.

Can other employed individuals be enrolled?

Yes, under the same conditions of enrollment in groups as the lower income group, and receive the same financial return from the contract.

Where can it be bought?

Through the non-profit hospitalization organizations at Shreveport, Monroe, Alexandria, Baton Rouge, and shortly, we hope, at New Orleans, as well as through the State Home Office.

Where is the State Home Office?

In the City of New Orleans, at 1430 Tulane Ave., where the State Medical Society has its headquarters.

When will it be ready for sale?

Shortly after October 1, 1946, by which time we expect to have a Certificate of authorization to do business from the Insurance Commissioner of Louisiana.

What will it include as benefits?

Payment for surgical and obstetrical care, whether in the hospital or not, and certain related services such as x-ray, anesthesia and laboratory work under certain conditions.

Why doesn't it cover medical cases as well?

The premium necessary to cover such cases would be too high, until the company has established a working reserve sufficient to protect the plan.

Is it planned to expand the services included?

Just as rapidly as is possible. All the profits of the present plan will be used ultimately to expand the coverage as fully as possible, since no person will make a profit out of the operation of the business.

What are some of the things it will do for the physician?

1. Enable him to treat his patients without having to carry the financial responsibility for their care.
2. Make for certainty of collection of accounts for services rendered under the contract.
3. Save the usual costs of collection of accounts.
4. Provide for prompt payment of accounts.
5. Enable him to provide needed services to individuals who formerly delayed as long as possible the receipt of such service because of their financial inability to pay for it.
6. Improve the quality of the physician-patient relationship.

What additional burdens will it place upon the physician?

Practically none.

1. A minimum of clerical work required in making out a statement of the account.
2. If in doubt as to the current eligibility of the subscriber to receive service, check by telephone or otherwise with the local or nearest branch office.
3. Educate your patients in the advantages to them of covering their family need in this simple and convenient way, in advance of their need.

What limitation of choice of physician will be made?

Absolutely none. Any physician licensed as a Doctor of Medicine by the Louisiana State Board of Medical Examiners will

be eligible to render services under the contract.

How widespread is this type of protection?

There are similar plans in operation or formation in practically every State in the Union.

Why is this movement so important?

Because American physicians and many other citizens feel that this is the only movement which will adequately meet the need of the American working man for medical care.

What will this plan do to the Wagner-Murray-Dingell type of legislation?

Render it as unnecessary as it is now undesirable and repulsive to the American people.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

CALENDAR OF MEETINGS

Oct. 14. Scientific Meeting, Orleans Parish Medical Society, 8 p. m.
Oct. 15. I. C. R. R. Hospital Staff, 12 noon
Charity Hospital Medical Staff, 8. p. m.
Oct. 16. Charity Hospital Surgical Staff, 8 p. m.
The Orleans Society of X-Ray Technicians, 7:30 p. m.
Oct. 17. Clinico-pathologic Conference, Touro Infirmary, 12 noon.
Oct. 18. Executive Committee, Hotel Dieu, 8 p. m.
Oct. 21. Hotel Dieu Staff, 8 p. m.
Oct. 22. Baptist Hospital Staff, 8 p. m.
Oct. 23. Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
French Hospital Staff, 8 p. m.
Catholic Physicians Guild, 8 p. m.
Oct. 24. DePaul Sanitarium Staff, 8 p. m.
Oct. 25. L. S. U. Faculty Club, 8 p. m.
New Orleans Hospital Dispensary for Women and Children Staff, 8 p. m.
Oct. 31. Clinico-pathologic Conference, Touro Infirmary, 12 noon.
Nov. 1. Ochsner Clinic Staff, 8:30 p. m.
Nov. 4. Board of Directors, Orleans Parish Medical Society, 8 p. m.
Nov. 5. Orleans Parish Radiological Society, 7:30 p. m.
Eye, Ear, Nose and Throat Hospital, 8 8 p. m.
Nov. 6. Clinico-pathologic Conference, Marine Hospital, 7:30 p. m.
Mercy Hospital Staff, 8 p. m.

NEWS ITEMS

Dr. George E. Burch has been awarded a certificate of merit "for original research" by the American Medical Association. The award was made to Dr. Burch for his development of two instruments at the Tulane school of medicine, which are used in the diagnosing of diseases of the blood vessels and heart.

Dr. William B. Clark has just returned from Springfield where he attended the fifth meeting of the Central Illinois Society of Ophthalmology and Otolaryngology, August 3-4.

Dr. Daniel M. Kingsley is temporarily in New York City. He is at the New York Orthopaedic Dispensary and Hospital in order to complete the formal requirements of training for certification in orthopaedic surgery. Dr. Kingsley will remain in New York until July 1, 1947.

Dr. Theo F. Kirn was recently installed as chancellor of the Gentilly Council of the Knights of Columbus.

Dr. J. C. Menendez was recently elected commander of the First District of the American Legion.

Dr. Waldo L. Treuting was recently appointed president of the Louisiana State Board of Health.

CHANGES OF ADDRESS

Dr. George D. B. Berkett from 4900 St. Charles Ave. to 1521 Delachaise St. Dr. Wm. G. Fisher from 1521 Delachaise St. to 1707 Pere Marquette Bldg. Dr. Ira L. Hewitt to 1112 Richards Bldg. Dr. Alfred B. Longacre from 1521 Delachaise St. to 1707 Pere Marquette Bldg. Dr. Charles B. Odom from 1521 Delachaise St. to 1707 Pere Marquette Bldg. Dr. Marie Stanbery from 1206 Hibernia Bldg. to 815 Pere Marquette Bldg. Dr. Walker Thompson from 1430 Tulane Ave. to 4900 St. Charles Ave.

CHANGES IN MEMBERSHIP ROLLS

During the month of July the following changes took place in our membership rolls:

Two associate members (Drs. Jacob Faust and M. F. Wilson) were transferred to inactive membership.

Nine intern members (Drs. Paul L. Getzoff, Lemuel D. Haughton, James C. Jones, Raymond D. Kornegay, Hunter W. May, John J. Milligan, William G. Painter, James F. Stanley, Mary E. Witt) were removed from the rolls because of failure to renew their membership.

WELCOME HOME

The following physicians were recently separated from military service: Michael M. DeBakey, Ochsner Clinic; Charles A. Patterson, Jackson, Mississippi.

NEWS FROM MEMBERS IN MILITARY SERVICE

Lt. (j.g.) Emile A. Bertucci, Jr., MC, USNR, wrote to us from Bikini Atoll on July 4 (aboard the Submarine Tender U. S. S. Fulton AS 11) that he, along with fourteen other doctors, is doing highly confidential and secret work for the bureau of medicine and surgery; they are performing certain studies and autopsies on the animals used in the first test. Lt. Bertucci expects to be separated from the Navy shortly, and will return to New Orleans.

Lt. E. L. Leckert, Jr., MC, USA, is now stationed at Fort Bragg, North Carolina—Regional Hospital No. 2, Post Office Box 43.

LOUISIANA STATE MEDICAL SOCIETY NEWS

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
East Baton Rouge	Second Wednesday of every month	Baton Rouge
Morehouse	Second Tuesday of every month	Bastrop
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of very month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

LAFOURCHE VALLEY MEDICAL SOCIETY

The third quarterly meeting of this Society was held at the Morgan City High School on Wednesday, September 11.

The scientific portion of the meeting included talks by Drs. P. H. Jones of New Orleans, who spoke of cirrhosis of the liver and Dr. Fred. F. Boyce who spoke on appendicitis.

Following adjournment, a delicious meal was served at the New Shell Inn.

For years our friends, the physicians of St. Mary Parish, have been invited to our meeting. At the meeting in Houma it was voted that they be included in the regular roster as official members of the Society along with all members of the societies of Lafourche, Ascension, Assumption and Terrebonne Parishes.

Our meeting in Morgan City marked the first meeting in this parish.

NEW DEAN OF LOUISIANA STATE UNIVERSITY MEDICAL SCHOOL

Dr. Vernon William Lippard is now functioning as the new dean of the L. S. U. Medical School. Dr. Lippard was formerly Associate Dean at Columbia University prior to which time he was Assistant Dean. He is a pediatrician certified by the American Board of Pediatrics and is a member of the county, state and national medical organizations, as well as belonging to honorary fraternities Alpha Omega Alpha and Sigma Xi. In 1938-39 he was Director of Study, Commission for Study of Crippled Children. During the war he was a Lieutenant Colonel in the U. S. Medical Corps.

Dr. Lippard will be a distinct asset to the medical profession of Louisiana. He has a reputation of being an industrious worker, a man who is interested in the medical profession and one who has a most delightful and agreeable personality.

NEW PROFESSOR OF PEDIATRICS AT L. S. U.

It has been announced that Dr. M. E. Wegman is to succeed the late Dr. Chester Stewart as Professor of Pediatrics at L. S. U. Medical School. Dr. Wegman was Director of the School of Health of the New York City Health Department for four years and at the same time holding the position of Assistant Professor of Clinical Pediatrics and Public Health at Cornell. He has been a lecturer in child hygiene at Johns Hopkins and for eighteen months was Assistant Professor of Child Hygiene at the School of Tropical Medicine in Puerto Rico. He served a residency in pediatrics at Yale Medical School for a period of four years.

TULANE FACULTY PROMOTIONS

The dean of the Tulane Medical School, Dr. Maxwell E. Lapham, announces the following promotions in the School of Medicine, arranged in alphabetical order: Dr. John H. Bethea to instructor in surgery (plastic surgery); Dr. William McDonald Boles to assistant professor of clinical ophthalmology; Dr. Claude G. Callender to in-

structor in obstetrics and gynecology; Dr. Eugene H. Countiss to assistant professor of obstetrics and gynecology; Dr. Joseph S. D'Antoni to professor of clinical tropical medicine; Dr. Michael E. DeBakey to associate professor of surgery; Dr. Oren R. Depp to instructor in gynecology and obstetrics; Dr. John A. Holmes to assistant professor of obstetrics and gynecology; Dr. Sydney Jacobs to assistant professor of clinical medicine; Dr. Joseph M. Lubitz to associate in pathology; Dr. Mercer G. Lynch to assistant professor of clinical otolaryngology; Dr. John G. Menville to assistant professor of clinical urology; Dr. Leah S. Shaffer to associate in bacteriology; Dr. John R. Snavely to instructor in medicine; Dr. George F. Sustendal to instructor in gynecology and obstetrics; Dr. Roy H. Turner to professor of medicine; Dr. B. Bernard Weinstein to assistant professor of obstetrics and gynecology, and Dr. Jack K. Wickstrom to instructor in orthopedics.

NEWS ITEMS

Dr. W. D. Beacham presented a paper entitled, "The Management of Patients Presenting Large Uterine Myomata" at the fourteenth annual meeting of the Central Association of Obstetricians and Gynecologists held in Chicago September 19-21.

Dr. Guy A. Caldwell, Professor of Clinical Orthopedics, Tulane University School of Medicine, is one of 19 medical men appointed as members of the National Medical and Scientific Advisory Council of the National Arthritis Research Foundation.

Dr. Ambrose Storck, assistant professor of clinical surgery at Tulane University School of Medicine, has been made a consultant in general surgery for the Veterans Administration Hospitals in Louisiana, Mississippi and Texas. He is one of thirteen surgeons who have been appointed as consultants to the Veterans Administration Hospitals.

Dr. George Burch of the Department of Medicine of Tulane Medical School, will give a series of lectures at the University of Minnesota October 2-5. He has also been invited to present a paper before the Inter-American Heart Congress which will be held in Mexico City the following week.

Dr. Michael E. DeBakey has been named one of the members of the new Medical Advisory Committee to the Secretary of War.

Dr. F. L. Jaubert was elected National Historian for the United States and Canada of Phi Rho Sigma Medical Fraternity at its bi-annual convention held recently at Wawase, Indiana.

Dr. William A. Sodeman will speak at the conference of professors of preventive medicine at Ann Arbor, Michigan, September 30-October 4.

At the third annual meeting of the Honorary Consultants to the Army Medical Library held in Washington on October 4-5, Miss Mary Louise Marshall, librarian of Tulane University Medical School, read a paper on the Army Medical Library Classification System.

Miss Vera Morel, medical illustrator of the Tulane Medical School, is one of fifty charter members of the National Association of Medical Illustrators. The first meeting was held in Philadelphia, September 23-26.

The Annual Conference of State Secretaries and Editors will be held at the offices of the American Medical Association in Chicago, Saturday and Sunday, December 7-8, 1946.

The Metropolitan Life Insurance Company is conducting a special campaign on heart disease during the fall and winter months. At that time, the company's more than 20,000 field representatives, in cooperation with official and voluntary agencies, will reach the homes of millions of policyholders with a recently published pamphlet, Your Heart, developed in cooperation with the American Heart Association. A lay educational film on heart disease is also being prepared. Distribution will be made to physicians of a packet in which will be included material of special interest to doctors, and a scientific exhibit on heart disease, first shown at the A.M.A. meeting in San Francisco, is available for State and local professional meetings.

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in Atlanta, Georgia, April 3-4, 1947, providing essays of sufficient merit are presented in competition.

The Board of Trustees of the United States Pharmacopoeial Convention has authorized the translation of the coming U.S.P. XIII into Spanish, and Dr. A. A. Moll, Assistant Director of the Pan American Sanitary Bureau, will again undertake the translation. Dr. Moll also supervised the translation of both the U.S.P. XI and XII.

United States Pharmacopoeial standards have been widely accepted in Central and South American republics and the U.S.P. has also been looked upon favorably by the Spanish pharmacopoeial commission in Madrid. The demand for the Span-

ish edition has practically doubled in the past several years, indicating again the closer relationships which are being developed throughout the Americas.

At the Annual Meeting of the American College of Chest Physicians, held at San Francisco, June 27-30, 1946, Dr. Alton Oschner, New Orleans, was elected Governor of the College for the State of Louisiana.

The American Academy of Dermatology and Syphilology will meet in Cleveland, Ohio, December 7-12. The sessions will be held at the Statler Hotel with teaching clinics at Cleveland City Hospital the first three days of the week. It is intended to make this meeting a postgraduate seminar for visiting physicians. Dr. Harold E. Cole is general chairman.

The American Hospital Association has announced the establishment of a department within the association for the purpose of continuing certain of the functions originally initiated by the Commission on Hospital Care which commission disbands on October 1, 1946. The study will be financed by the Kellogg Foundation and the National Foundation for Infantile Paralysis.

COLONEL STEGER HEADS MEDICAL TRAINING CENTER AT CAMP POLK

Establishment of a Medical Training Center at Camp Polk, La., under the jurisdiction of Brooke Army Medical Center, Fort Sam Houston, Texas, was announced recently by Brig. Gen. John M. Willis, Commandant, Brooke Army Medical Center. Camp Polk is located near Leesville, La., southwest of Shreveport.

Commanding officer of the new Center is Col. Byron L. Steger, MC, Gen. Willis announced.

CANCER CONTROL DIVISION OF THE STATE HEALTH DEPARTMENT

Dr. Waldo L. Treuting announces that a Division of Cancer Control has been established in the State Health Department. Dr. James S. May will be the acting head of this division. The funds for operation will be allotted through the United States Public Health Service and will amount to approximately $50,000.00. These funds cannot be expended for treatment or for establishment of cancer clinics, rather they will be employed to make a survey of the state and to promote an educational campaign against cancer.

RESIDENT TRAINING IN SURGERY

Tulane Medical School has just consummated arrangements with Vicksburg Hospital, Inc., to share in a resident training program in surgery. Because of this arrangement Vicksburg Hospital, Inc., has been formally approved for graduate training in surgery by the Council on Medical Education, by the American College of Surgeons and by the American Board of Surgery. The first six months of a residency will be spent in the Department of Surgery in this School of Medicine and the remaining two and one-half years in Vicksburg Hospital, Inc. Dr. Willard H. Parsons is head of the surgical section in this Vicksburg organization.

PACK HEADS MEDICAL ADVISORY COMMITTEE OF NATIONAL CANCER FOUNDATION

Pointing out "one of the most urgent public health problems of the day" is the need of hospital facilities for the treatment and terminal care of the innumerable patients in the United States who have incurable cancer, Dr. George T. Pack, chairman of the medical and scientific advisory council of the recently organized National Cancer Foundation, today (Tuesday, Sept. 10) announced the formation and membership of the Medical Advisory Council. The medical advisory committee of 28 includes Dr. Rudolph Matas.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, INC.

The next written examination (Part I) for all candidates will be held in various cities of the United States and Canada on Friday, February 7, 1947, at 2:00 p. m. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year. All applications must be in the office of the Secretary by November 1, 1946. Candidates in military service are requested to keep the secretary's office closely informed of changes in address.

PHYSICIAN NEEDED

Services of a physician for Merryville, Louisiana, and surrounding territory have been requested by a special committee from that vicinity. It is stated that because of the oil activity in this area many new families have moved into the community and since the nearest physician is 19 miles from Merryville the problem is very acute. Contact the office of the secretary of the State Society if further information is desired in this regard.

INFECTIOUS DISEASES IN LOUISIANA

The weekly morbidity report for the State of Louisiana for the week ending August 3, showed the following reportable diseases in numbers greater than ten: 183 cases of cancer, 139 of unclassified pneumonia, 30 of rheumatic fever, 27 of pulmonary tuberculosis, 24 of pneumococcic pneumonia, 22 of measles, 19 of poliomyelitis, 17 of malaria and 11 of septic sore throat. The poliomyelitis cases were scattered throughout the state, Orleans Parish with three and East Baton Rouge with two, were the only two parishes reporting

more than one case. For the week which closed August 10 there were listed 85 cases of malaria, 57 of pulmonary tuberculosis, 24 of septic sore throat, 17 each of unclassified pneumonia and poliomyelitis and ten of typhus fever. Poliomyelitis cases were reported four each from Caddo and East Baton Rouge Parishes, two each from Franklin and Natchitoches and individual cases from other parishes throughout the state. Practically every one of the malaria cases were contracted within continental United States. For the week which closed August 17 there was a sharp decrease in the number of reportable diseases; only three occurring in numbers greater than ten, namely pulmonary tuberculosis with 29 instances, poliomyelitis with 22 and typhus fever with 24. The poliomyelitis cases were again scattered throughout the state, Orleans Parish being the only parish with more than two cases. The typhus fever cases were reported largely from Orleans Parish, there being 14 such instances. The week ending August 24 was also a relatively healthy week except for poliomyelitis, 21 cases of which were reported at this time. The only other two diseases in numbers greater than ten were pulmonary tuberculosis, 44 cases and typhoid fever, 16. The poliomyelitis cases were again diffused with East Baton Rouge Parish being the only parish having more than two cases. The typhoid fever incidence which was rather remarkable, may have been due to a mild epidemic in Bienville Parish where seven cases were listed. For the week ending August 31 the figures were quite different from the previous week, there being recorded 183 cases of cancer, 133 of unclassified pneumonia, 47 of pulmonary tuberculosis, 23 of pneumococcic pneumonia, 17 each of diphtheria and malaria, 16 of poliomyelitis, 14 of measles, 11 of rheumatic fever and 10 of amebiasis. This week East Baton Rouge Parish again had three new cases of poliomyelitis while Caddo and Orleans Parishes reported two each.

MONTHLY MORBIDITY FOR VENEREAL DISEASES, STATE OF LOUISIANA

Month Ending July 31, 1946

	Total This Month	Total Previous Months	Total To Date 1946
Chancroid	72	338	410
Gonorrhea	1693	10182	11875
Granuloma Inguinale	23	168	191
Lymphopathia Venereum	11	67	78
Syphilis	1908	10053	11961

HEALTH IN NEW ORLEANS

The Bureau of the Census, Department of Commerce, reported that for the week ending August 10 there occurred in the City of New Orleans 136 deaths, divided 93 white and 43 colored with 20 of these deaths occurring in children under one year of age. The following week the figures were almost identical; two more deaths occurred in the city, three more in the white race and one less in the colored race. The death rate in children was almost exactly the same. For the week which closed August 24, there was a diminution in the death rate in the city, 123 people expired in New Orleans this particular week, 84 of whom were white, 39 non-white and only 12 were in infants. There was a further reduction in the number of deaths in the city in the last week in August when 115 deaths were recorded. Eighty of these deaths were in the white population, 35 in the colored and ten in children under one year of age. In spite of the increase in population in the city the number of deaths recorded each week shows a decided drop.

BOOK REVIEWS

Poet Physicians: An Anthology of Medical Poetry written by physicians: Compiled by Mary Lou McDonough, Springfield, Ill., Chas C. Thomas, 1945. Pp. 210. Price $5.00.

This is an anthology of medical poetry written by physicians and contains examples of poetic endeavors of many physicians who were better physicians than poets and many poets who are relatively poor physicians or merely classified as physicians since they obtained a medical degree, but never truly practiced medicine in the usual sense of the term. The number of true poet physicians who achieved fame in both fields is extremely small. Miss McDonough lists only Weir Mitchell and Oliver Wendell Holmes in this category. Probably a few more might be correctly added to this list.

This book makes interesting reading despite the fact that one might quarrel in many instances with the selection of poems representing various men and also the omission of certain men from her list. However, everything being considered, this forms a very nice collection which is of considerable interest to those who never cease to marvel at the versatility of medical men. An idea of the extensive contribution of medical men to poetry can be more correctly gathered from Danna's bibliography of medical poetry which was published some years ago and the innumerable collections which have occurred from time to time since. This book makes an interesting addition to the medical literary library.

B. B. WEINSTEIN, M. D.

Fractures, Dislocations, and Sprains: By John Albert Key, B. S., M. D., and H. Earle Conwell,

M. D., F. A. C. S., 4th Ed., St. Louis, C. V. Mosby Co., 1946. Illus., pp. 1322. Price, $12.50.

The revised edition of this volume is a welcome addition to the list of reference works on fractures, for surgeons, teachers, and students alike.

The volume is profusely illustrated by x-ray, drawings, and photographs.

There are several chapters which warrant special mention.

In chapter one, devoted to general considerations, the authors have gone to much pains to detail necessary fracture equipment and plaster of paris technic. This chapter should prove of interest especially to those interested in the proper equipment of institutions for the care of these cases.

The chapter devoted to the Workmen's Compensation Law and also the one devoted to Medico-Legal aspects of fracture cases should be read with interest and profit by all interested in the subject of fractures.

The chapters devoted to particular fractures emphasize a phase in the management of the injured which is all too often overlooked, the anatomic considerations involved and the importance of a knowledge of the forces which produce deformity.

The authors are to be congratulated in once again stressing the importance of a carefully conducted clinical examination prior to x-ray studies; such teaching is certainly welcomed at a time when so many are willing to resort to, and depend upon x-ray alone.

Like every subject there are controversial points. One cannot expect to find in the work of others entire agreement with his own views. This volume has the merit that it expresses personal views and convictions based on experience. Honest differences of opinion make for progress. It is easy to recommend this volume for careful study by those interested in fractures.

ISIDORE COHN, M. D.

Clinical Case-Taking: By George R. Herrmann, M. D., Ph. D., 3rd ed., St. Louis, C. V. Mosby Co., 1945. Pp. 192. Price, $1.75.

A new edition of this most compact and comprehensive "guide for the study of patients" is always a welcome addition to our teaching armamentarium. By this time it is so well known that it is only necessary to call attention to its publication. It is a "must" on every teacher's program and an invaluable aid to physicians who are desirous of improving their ability to take complete histories and to do thorough physical examinations and to develop an intelligent understanding of the laboratory data essential in establishing a diagnosis.

I. L. ROBBINS, M. D.

The Surgical Technic of Abdominal Operations: By Julius L. Spivack, M. D., LLD. 4th ed. Springfield, Ill. Charles C. Thomas. 1946. Pp. 712, 682 illus. Price, $10.00.

The need and usefulness of Spivack's "The Surgical Technic of Abdominal Operations" is evidenced by the fact that it is now in its fourth edition. The book records the most common and important abdominal surgical procedures, which is accomplished by clear and concise step by step explanations and illustrations. He discusses the gentle handling of living tissues with a consideration of ligatures, sutures, and the different technics of tying knots. The regional anatomy and surgical technics of important operations on the organs and structures contained in the abdominal cavity are discussed in detail.

The indications, the anatomy, the type of incision in operations upon the small and large bowel, stomach, gallbladder, billary tract, spleen, pancreas and various types of herniae are discussed in a well organized, logical sequence. Some of the more common gynecologic procedures are similarly described. Numerous illustrations and detailed explanations serve to clarify many points in technic and surgical anatomy.

The author has added a great deal to the completeness of the book by discussing not only each surgical procedure, but also its historical background and evolution. An excellent bibliography follows each chapter.

The book has a definite field of usefulness for the beginner during his apprenticeship, as the author points out in the preface, and is in no way meant to replace this period of training. The general surgeon will find it valuable as a review of various surgical technics and a very interesting study from a historical standpoint.

W. I. WATERS, M. D.

PUBLICATIONS RECEIVED

Grune & Stratton, New York: Progress in Neurology and Psychiatry, by A. E. Spiegel, M. D. Allergy, By Erich Urbach, M. D., and Philip M. Gottlieb, M. D.

John Hopkins Press, Baltimore: Jewish Luminaries in Medical History, Harry Friedenwald, M. D., D. H. L.

Lea & Febiger, Philadelphia: The Normal Encephalogram, by Leo M. Davidoff, M. D. and Cornelius G. Dyke, M. D. X-ray and Radium in the Treatment of Diseases of the Skin, By George M. MacKee, M. D., and Anthony C. Cipollaro, M. D.

W. B. Saunders Company, Philadelphia: A Primer for Diabetic Patients by Russell M. Wilder, M. D., Ph. D., F. A. C. P.

Charles C. Thomas, Publisher, Springfield, Ill.: Early Ambulation and Related Procedures in Surgical Management, by Daniel J. Liethauser, M. D., F. A. C. S., Renal Hypertension, by Eduardo Braun-Menendez, Juan Carlos Fasciolo, Luis F. Leloir, Juan M. Munoz, Alberto C. Taquini and translated by Lewis Dexter, M. D.

WOMAN'S AUXILIARY TO THE LOUISIANA STATE MEDICAL SOCIETY

PAST PRESIDENTS

Mrs. Oscar Dowling, New Orleans, 1929-30.
Mrs. Arthur A. Herold, Shreveport, 1930-31.
Mrs. Henry W. E. Walther, New Orleans, 1931-32.
Mrs. Robert T. Lucas, Shreveport, 1932-33.
Mrs. John H. Musser, New Orleans, 1933-34.
Mrs. T. H. Watkins, Lake Charles, 1934-35.
Mrs. Herman B. Gessner, New Orleans, 1935-36.
Mrs. James B. Vaughn, Monroe, 1936-37.
Mrs. George D. Feldner, New Orleans, 1937-38.
Mrs. Frederick G. Ellis, Shreveport, 1938-39.
Mrs. S. M. Blackshear, New Orleans, 1939-40.
Mrs. Roy Carl Young, Covington, 1940-41.
Mrs. Aynaud Hebert, New Orleans, 1941-42.
Mrs. Clarence B. Erickson, Shreveport, 1942-43.
Mrs. George J. Taquino, New Orleans, 1942-43.
Mrs. Rhodes Spedale, Plaquemine, 1944-45.
Mrs. Paul G. Lacroix, New Orleans, 1945-46.

1946 - 1947
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Dr. King Rand, Alexandria.
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Parliamentarian: Mrs. Arthur A. Herold, 1116 Louisiana Ave., Shreveport.

CHAIRMEN OF STANDING COMMITTEES

Archives: Mrs. John S. Herring, 1229 Cadiz St., New Orleans.
Bulletin: Mrs. Felix Boizelle, 2255 Kleinert Ave., Baton Rouge.
Cancer Control: Mrs. Clarence Erickson, 423 Herndon Ave., Shreveport.
Commemoration Fund: Mrs. Aynaud Hebert, 2013 Napoleon Ave., New Orleans.
Doctors' Day: Mrs. H. Aubrey White, 2613 Vance Ave., Alexandria.
Exhibits: Mrs. Paul G. Lacroix, 3132 State Street Dr., New Orleans.
Finance: Mrs. F. U. Darby, 2232 Terrace Ave., Baton Rouge.
Historian: Mrs. Wiley A. Dial, 1137 Park Blvd., Baton Rouge.
Hygeia, Mrs. J. E. Heard, 512 McCormick St., Shreveport.
Legislation: Mrs. Edward G. Cailleteau, 6767 Goodwood Ave., Baton Rouge.
Organization: Mrs. James W. Warren, 470 Audubon Blvd., New Orleans.
Press & Publicity: Mrs. Marcus C. Wiginton, Hammond.
Printing: Mrs. Roy B. Harrison, 2327 Napoleon Ave., New Orleans.
Program: Mrs. Richard T. Stephenson, 2123 Perkins Rd., Baton Rouge.
Public Relations: Mrs. Rhodes Spedale, 701 Eden St., Plaquemine.
Red Cross: Mrs. DeWitt T. Milam, 1704 Island Dr., Monroe.
Revision of By-Laws: Mrs. C. Grenes Cole, 4938 St. Charles Ave., New Orleans.
Year Book: Mrs. Daniel J. Murphy, 127 S. Solomon St., New Orleans.

COUNCILORS

1st District: Mrs. Donovan C. Browne, 4920 St. Charles Ave., New Orleans.
2nd District: Mrs. J. Kelly Stone, 72 Fontainbleau Dr., New Orleans.
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8th District: Mrs. Earl Jones, 633 Jackson St., Alexandria.

MESSAGE OF PAST PRESIDENT OF LOUISIANA STATE MEDICAL SOCIETY TO WOMAN'S AUXILIARY

As president of the State Medical Society, I had the unique distinction and honor of serving with two presidents of the Auxiliary. While the Auxiliary was able to hold its meeting during the year 1945 and install new officers, it was not possible for the State Society to meet and install its officers. Our constitution permits only the House of Delegates to elect and install the officers and since our House of Delegates consists of more than fifty members we could not get permission to hold a meeting in 1945, hence it became my distinction to hold office for two years.

During this period of service the relationship between the Woman's Auxiliary under the leadership of Mrs. Rhodes Spedale in 1945 and Mrs. Paul Lacroix in 1946 was most cordial and the organization never failed to cooperate and give every as-

sistance when called upon. There are many ways in which the Auxiliary can be of benefit to medicine. One of the objects of your organization is "to extend the aims of the Medical Profession through the women members of families of physicians to other organizations which look forward to advancement in Health and Education." The Auxiliary should make it one of its foremost projects — the furnishing of speakers to women's organizations to keep them informed of the aims and purposes of medicine. Also to keep the public informed of adverse legislation that may be introduced both in our own state and nationally. When the public is informed and thoroughly cognizant of just what medical legislation means, they will frequently and almost universally agree with us and see the reasons for our fight against certains laws and regulations. On the other hand when they are not properly informed they are inclined to believe and agree with the politician's point of view. Your organization has had this proved to it on several occasions during the past two years. We, of the State Medical Society, appreciate the efforts put forth by the Auxiliary to accomplish these aims.

Soon the State Medical Society will offer to the residents of Louisiana a prepayment medical service and the Auxiliary can be of a great deal of assistance in acquainting the women's organizations with our plan. The success of prepayment health insurance is one of the best means of combating socialized medicine.

Now that the war is over it will not be necessary for the Auxiliary members to spend time in war work. This time that they so freely gave during the war period can now be utilized to continue to work for medicine.

If, at any time, the Auxiliary needs the advice, counsel or judgment of its parent organization, do not hesitate for a moment to call upon us. I know that our officers are always willing and ready to work and cooperate with you in any worthwhile project.

May the Auxiliary keep up its good work and may it be as fortunate in the selection of its future officers as it has been in the past.

VAL H. FUCHS, M.D., President,
Louisiana State Medical Society.
1944-46

A MESSAGE TO THE WOMAN'S AUXILIARY

As Chairman of the Advisory Board of the Woman's Auxiliary for the years 1944-1946 may I express to you the great satisfaction I feel for the splendid work and cooperation of the Auxiliary with the Louisiana State Medical Society.

There apparently has been very little that has been needed by the Auxiliary from the Advisory Board but you may be sure that any time you might feel that our services may be of value we hope you will not hesitate to call on us.

With felicitations and best wishes for your continued good work, I am

WALDEMAR R. METZ, M.D.,
Chairman, Advisory Council.
1944-46

THE PRESIDENT'S MESSAGE

This is to be my last message to you as your President. What a great privilege to have been so honored!

My years ahead will be richly spiced with lovely memories of ardent, loyal, friendly co-workers who so willingly and courteously responded to every appeal.

Your manifest courage and determination to help our doctors with the legislative problems facing them today has been an outstanding achievement this year.

The reports of our parish presidents and our chairmen indicate how staunchly and actively you have participated in the fields of public health, public welfare and in the vital field of Christian charity and brotherly love.

To expand and improve upon these splendid accomplishments should be our goal.

It would be gratifying to me to know of some especially impressive way to tell you how deeply I have appreciated your help and cooperation; how much I have enjoyed working with you.

Again let me thank you.

I wish to thank Dr. Val Fuchs, President of the Louisiana State Medical Society; the Advisory Committee, Dr. Waldemar Metz, Dr. King Rand and Dr. Rhodes Spedale; Dr. Paul T. Talbot, Secretary-Treasurer of the Louisiana State Medical Society and Dr. John Musser, Editor of the New Orleans Medical and Surgical Journal for their kindly assistance during my term of office.

MRS. PAUL G. LACROIX,
President 1945-46.

IN MEMORIAM

1944	
Mrs. J. T. Prosser	Morgan City
Mrs. A. G. Friedrichs	New Orleans
Mrs. Davidson K. Texada	Alexandria
1945	
Mrs. H. D. Bulloch	Covington
Mrs. Joseph P. Palermo	New Orleans
1946	
Mrs. H. S. Cocram	New Orleans
Mrs. David Jamison	New Orleans
Mrs. W. P. Bordelon	Lake Charles

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1946-1947

President: Mrs. Jesse D. Hamer, Phoenix, Arizona.

WOMAN'S AUXILIARY TO SOUTHERN MEDICAL ASSOCIATION
1946-1947

President: Mrs. W. W. Potter, Concord, Tennessee.
President-Elect: Mrs. Wiley R. Buffington, New Orleans, Louisiana.

PROJECTS
1946-1947

Extension of Medical Services Through Voluntary Prepayment Plans
Periodic Health Examinations
Cancer Control
Red Cross
Hygeia
Anti-Tuberculosis
Doctors' Day
Organization
Commemoration Fund

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Publicity: Mrs. F. E. Baker, Gonzales.

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Marcello, Mrs. Luke, DeRidder.
Roberts, Mrs. Sam T., DeRidder.
Sartor, Mrs. Thomas R., DeRidder.

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2nd Vice-President: Mrs. H. Whitney Boggs.
Recording Secretary: Mrs. W. J. Hill, Jr., Shreveport.
Treasurer: Mrs. W. S. Kerlin, Shreveport.
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Butler, Mrs. W. P., Shreveport.
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Crain, Mrs. A. P., Shreveport.
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Drummond, Mrs. W. F., Shreveport.
Duncan, Mrs. Dean H., Shreveport.
Durham, Mrs. H. A., Shreveport.
Edwards, Mrs. E. Clay, Shreveport.
Erickson, Mrs. C. B., Shreveport.
Furman, Mrs. F. S., Shreveport.
Gallager, Mrs. Henry, Shreveport.
Galloway, Mrs. Edgar, Shreveport.
Garrett, Mrs. B. C., Shreveport.
Garrett, Mrs. George G., Shreveport.
Gill, Mrs. S. L., Shreveport.
Gilmer, Mrs. P. R., Shreveport.
Glass, Mrs. T. A., Shreveport.
Gorton, Mrs. J. M., Shreveport.
Gorton, Mrs. L. W., Shreveport.
Gowen, Mrs. C. R., Shreveport.
Gray, Mrs. Leon F., Shreveport.
Hall, Mrs. W. M., Shreveport.
Hargrove, Mrs. M. D., Shreveport.
Harmon, Mrs. W. S., Shreveport.
Harwell, Mrs. W. R., Shreveport.
Hawkins, Mrs. I. F., Shreveport.
Heard, Mrs. J. E., Shreveport.

Heath, Mrs. A. G., Shreveport.
Heidorn, Mrs. W. B., Shreveport.
Hendrick, Mrs. J. V., Shreveport.
Herold, Mrs. A. A., Shreveport.
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